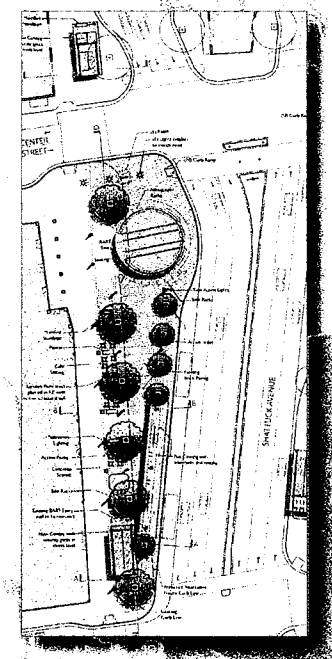

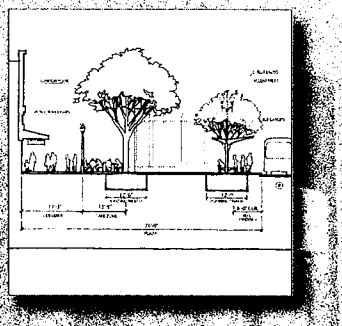

Downtown Berkeley BART Plaza & Transit Area Urban Design Plan

Prepared for:

City of Berkeley
Transportation Division of the Department of Public Works

Prepared by:

Community Design + Architecture, Inc
Nelson\Nygaard Consulting Associates
Strategic Economics
Cambridge Systematics

November 18, 2006

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1 Executive Summary

1.1 Study Purpose and Process

The City of Berkeley, led by the Transportation Division of the Department of Public Works, with assistance from the consulting firms Community Design + Architecture (CD+A), Nelson\Nygaard Consulting Associates, Strategic Economics, and Cambridge Systematics, undertook a community-based urban design and transportation planning process to develop a concept plan for the Downtown Berkeley BART Plaza and Transit Area. The planning effort was funded by a Transportation for Livable Communities planning grant from the Metropolitan Transportation Commission and was conducted in co-operation with BART and AC Transit.

The primary goal of the project has been to create a comprehensive vision for public improvements to the transit plaza and vicinity that plans for the needs of Berkeley's changing and growing population, considers planned improvements in bus transit service, and better meets the needs of existing activities and users. The study has developed a concept-level set of capital improvements for the BART Plaza and the surrounding area. These are focused on short-term improvements that can create an improved environment now, while setting the stage for future change.

The first part of the planning process exhaustively identified issues and the opportunities of the Study Area. The issues, which included circulation options, the primary BART entry, and open space opportunities helped inform the development of four design alternatives.

The alternatives, examined a number of transportation and urban design issues, including the incorporation of dedicated bus lanes in the study area, reconfiguration of Shattuck Avenue, closure or partial closure of Center Street between Shattuck Avenue and Oxford Street, modifications to bicycle and pedestrian facilities, and redesign and programming of open space areas. Due to its limited nature, further analysis of some of these issues, such as the reconfiguration of Shattuck Avenue or Center Street, is beyond the scope of this study. The work completed on the design alternatives does, however, inform the larger visioning and planning process to update the Downtown Area Plan, which is underway concurrently.

Consequently, the second part of the planning process focused on identifying short-term improvements that can happen regardless of future change, but that can, on their own, improve the public space in the Downtown Area for all users.

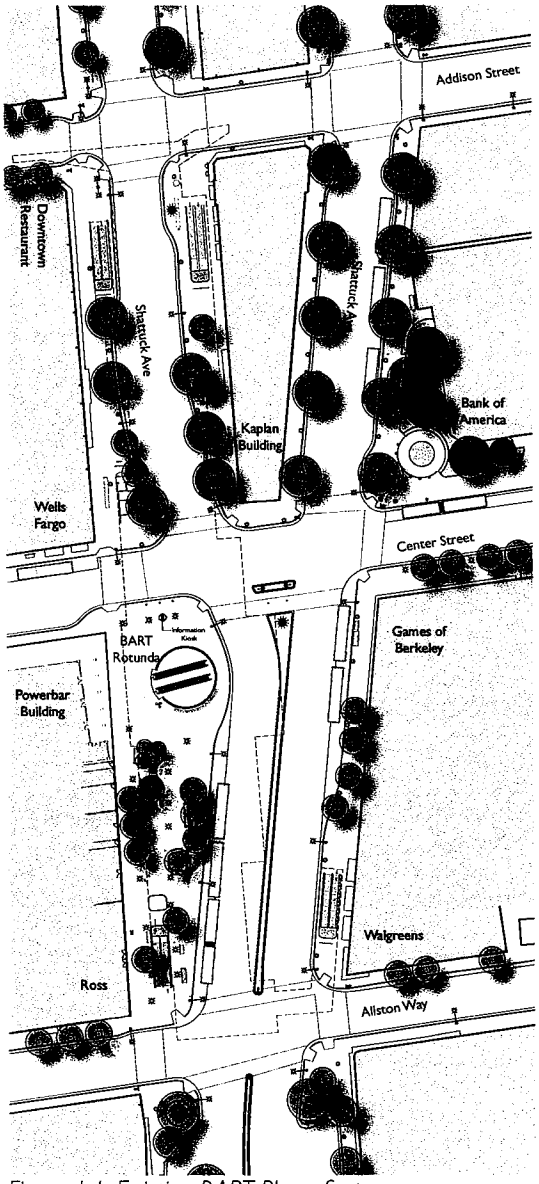


Figure 1.1: Existing BART Plaza features

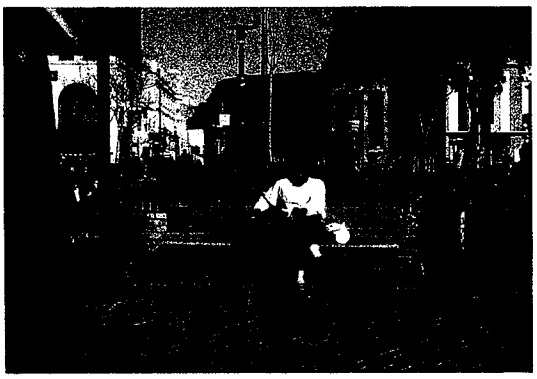


Figure 1.2: The existing plaza has obstacles that limit visual connections and obstruct pedestrians in the plaza.

Figure 1.3: Aerial view with outline of Study Area

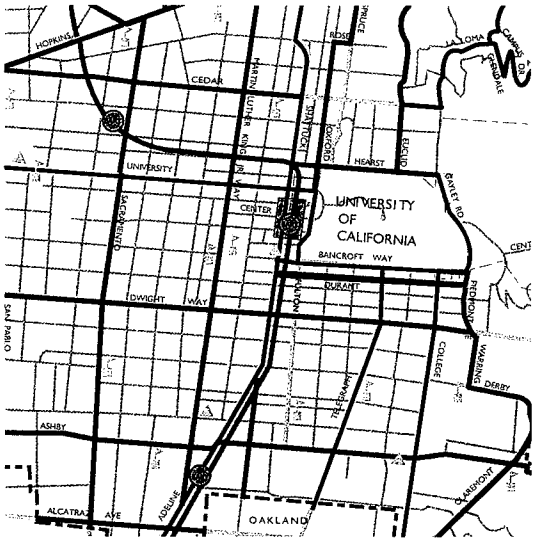


Figure 1.4: The Study Area in the larger context of the city

Two public meetings, led by CD+A and City staff, gathered input on the project's goals and objectives, additional information on existing conditions, and public comments on the four design alternatives. Over 50 people attended the first meeting, while nearly 100 attended the second. Additionally, a Technical Working Group and Citizen's Advisory Committee met four times over the course of the project to review and provide feedback on all phases of the project.

1.2 Site Information

The primary Study Area focuses on the Downtown Berkeley BART Plaza. It extends from Addison Street at the north to Allston Way at the south on both sides of Shattuck Avenue. The Downtown Berkeley BART Plaza area is heavily used by transit riders, pedestrians, bicyclists, and motorists. It provides one of the primary access points to UC Berkeley, and to the residential, commercial, employment, and cultural uses located in Downtown Berkeley.

The key site features and design considerations are described in detail in Section 2 of this report.

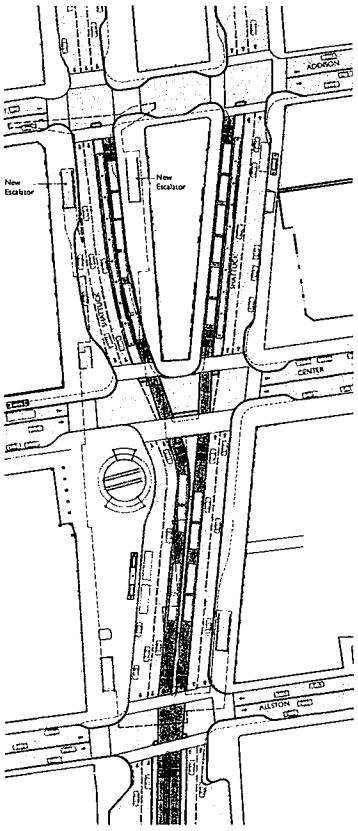
1.3 Alternative Design Scenarios

There are many possible design solutions that meet the project goals and objectives, while addressing the site opportunities and constraints. This process considered in some detail a number of potential alternative design scenarios. The design alternatives considered different bus transit scenarios, pedestrian and bicycle circulation alternatives, and major and minor changes to BART access. Each alternative also considered the implications for public space design. The design team also evaluated alternative scenarios for the treatment of Center Street and for improvements to the BART Bike Station.

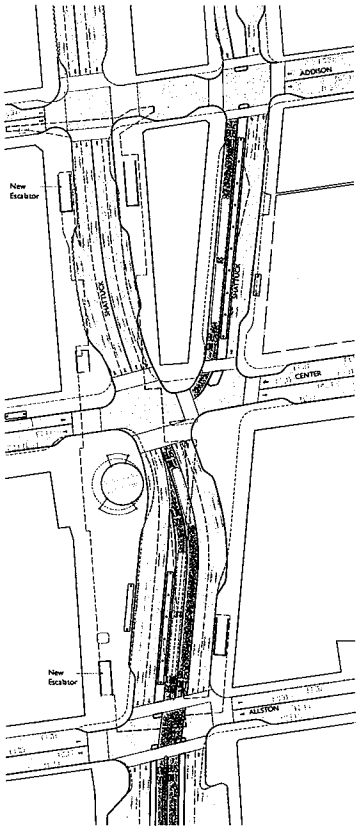
The design alternatives and evaluations are described in detail in Section 3 of this report.

1.4 Concept Plan Overview

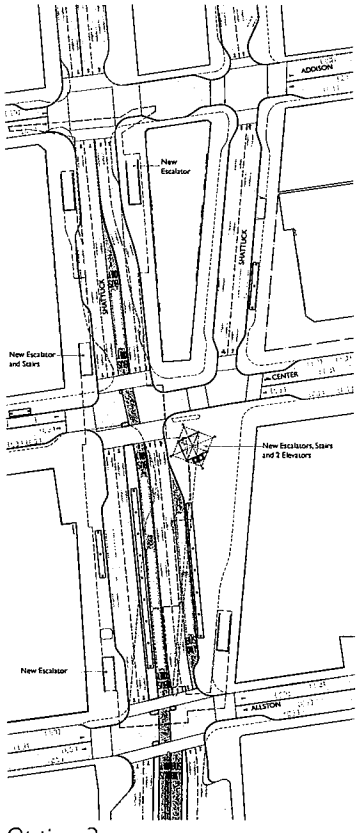
There is clear direction from the public workshop and other stakeholders in support of a long-term vision that involves major changes to the Study Area. However, these long-term changes require further study of several key issues before they can be finalized. While further study of these issues is beyond the scope of this project, which is intended to develop a concept-level set of capital improvements for the Study Area, it has developed a



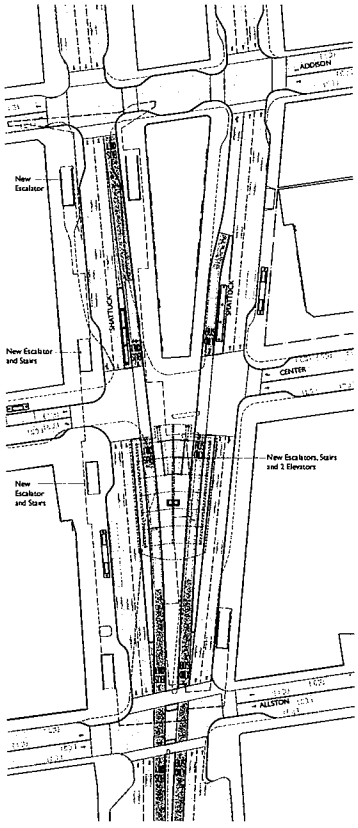
Option 1



Option 2



Option 3



Option 4

Figure 1.5 Sketch concept alternatives tested different access scenarios and approaches to public spaces. A larger version and text description of each option is included in Section 3

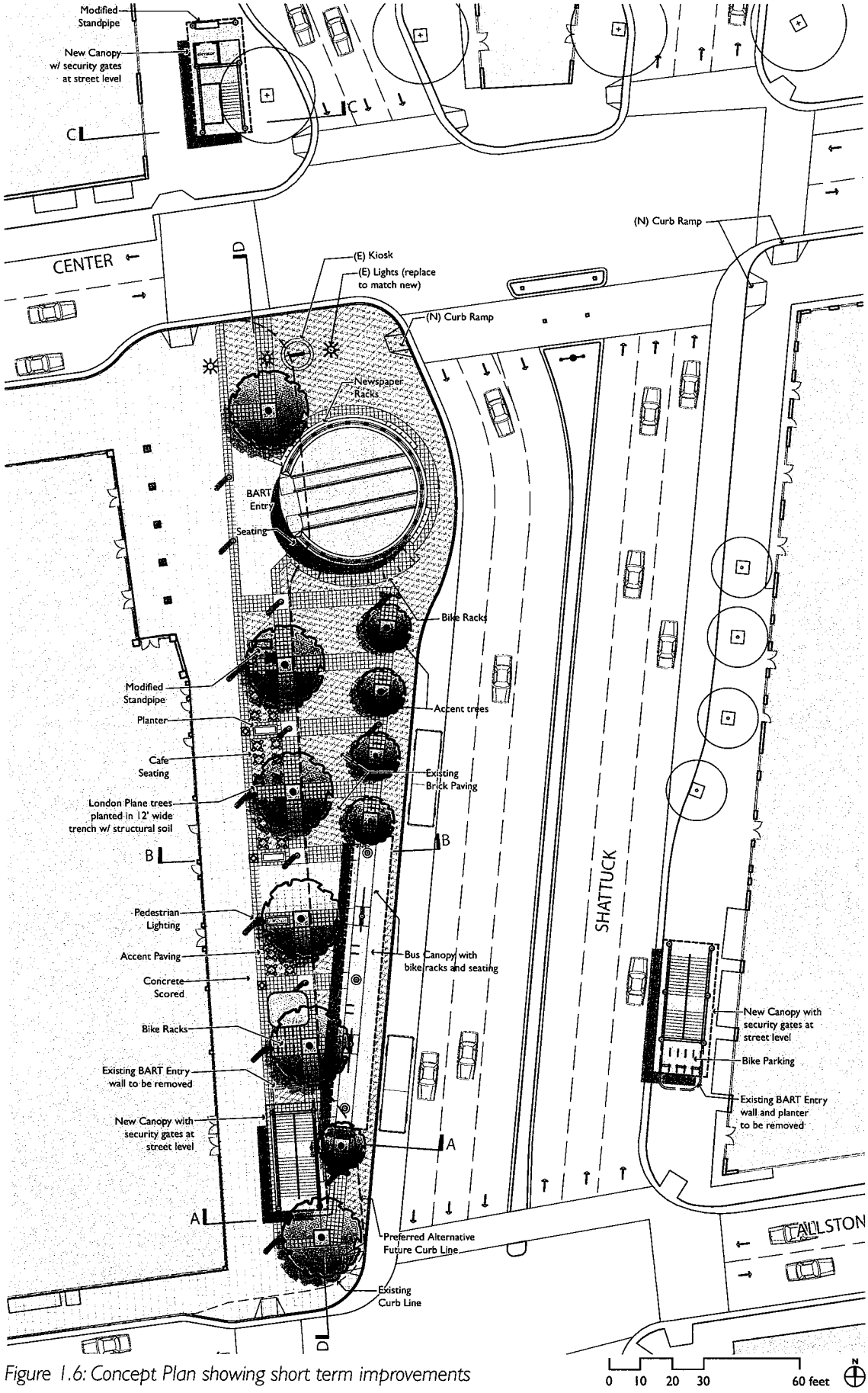


Figure 1.6: Concept Plan showing short term improvements

program of short-term improvements that make needed changes while supporting the framework for the long-term vision.

The concept plan for short-term improvements reorganizes the BART Plaza space into clearly defined zones of activities without changing the street configuration. The redesign creates a wide sidewalk zone with the potential for café seating between the sidewalk and main plaza area and a transit zone along the street edge. It develops a unique vocabulary for the Downtown transit architecture which is reflected in the new canopies over secondary entries to BART and the multi-purpose bus canopies. These features not only improve the visibility and the legibility of the plaza (especially for the pedestrians) but also address maintenance and security concerns. The plan utilizes lighting and paving from the surrounding areas to tie the plaza into the larger Downtown Area. It takes into consideration the curb line for the future west side of Shattuck Avenue under an eventual long-term reconfiguration so that short-term investments will prepare the area for long-term options. The café zone, larger street trees, and street lighting all serve to establish the potential future location and conditions of the west curb of Shattuck Avenue.

The Concept Plan design is described in detail in Section 4 of this report.

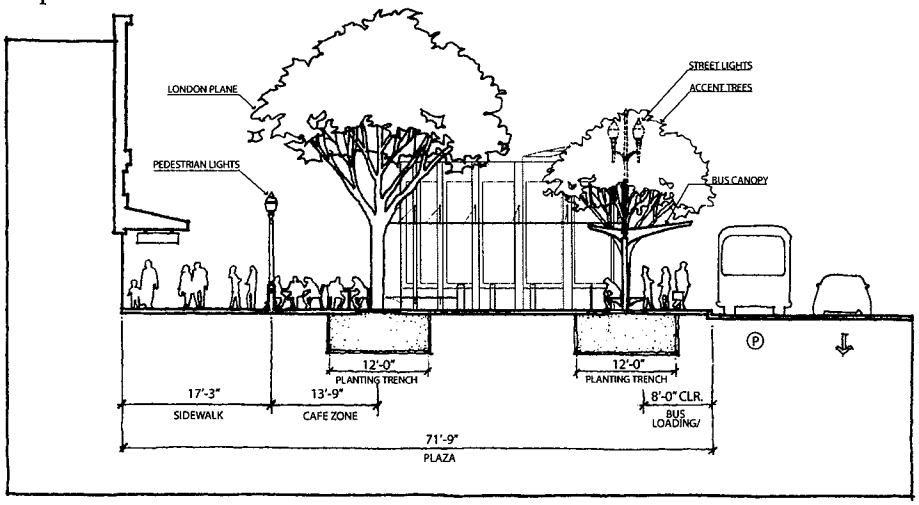


Figure 1.7: Section BB through the plaza shows the relationship between the sidewalk zone, the cafe zone, and the transit zone.

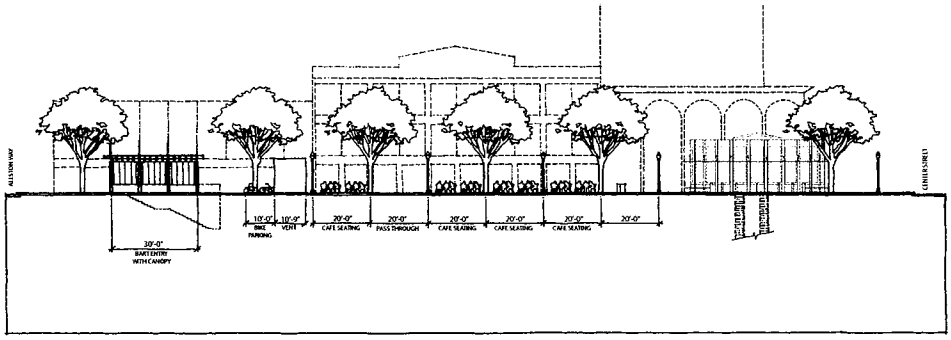


Figure 1.8: Plaza Elevation looking west shows the rhythm that new street trees and lights will create, punctuated by new architectural treatment of the BART entries.

1.5 Next Steps

Review and Approval of the Plan

This Concept Plan was presented in July 2006 to the Transportation Commission for review and endorsement and will subsequently be presented to the Downtown Area Plan Advisory Committee in September. This process of input and discussion will ensure that the Concept Plan can be used in the future to secure capital funding for needed improvements and will ensure consistency between this document and the ongoing Downtown-wide transportation and land-use planning effort. The Concept Plan will be brought to City Council for approval as part of capital grant funding applications.

Short-term Improvements and Capital Funding

The improvements detailed in the Concept Plan can be implemented in the near future. The City will need to continue its collaboration with BART, AC Transit, and the Bear Transit and LBNL shuttle services to ensure that the improvements complement Downtown transit while creating opportunities for new activity on the plaza. Continued collaboration with the Downtown Berkeley Association, local business owners and residents, and other community stakeholders will also be necessary as the concept plan is implemented. Section 4 of this report highlights some potential sources of capital funding.

Integration with Bus Rapid Transit (BRT) Planning

The City of Berkeley will need to work with AC Transit to make sure enhancements to bus service in the Downtown are compatible with the multi-modal access needs of the community. The alternative bus enhancements considered in this report have identified potential benefits to overall circulation with the introduction of exclusive bus lanes. By consolidating stops, exclusive lanes would free curb space for other uses, such as auto drop-off and short-term parking and widened sidewalks throughout the Study Area. The City can use this study to provide informed critiques as AC Transit's planning efforts move forward.

DAP Process and Long-Term Vision

This study has recommended a dynamic long-term vision with large-scale improvements to the Study Area. The short-term improvements in this plan are a first step towards this vision, but the Downtown Area Plan will provide the long-term vision, with appropriate analysis of key circulation and public space considerations. The key recommendations for the long-term vision from this report are outlined in Section 4.

2 Project Overview

In 2004, the City of Berkeley and its project partners, BART and AC Transit, received a $75,000 Transportation for Livable Communities (TLC) planning grant from the Metropolitan Transportation Commission (MTC) to create a Design Plan for the Downtown Berkeley BART Plaza and Transit Area. The city provided $15,000 in matching funds.

Beginning in the summer of 2005, the City of Berkeley, led by Transportation Division of the Public Works Department staff, with assistance from the consulting firms Community Design + Architecture (CD+A), Nelson\Nygaard Consulting Associates, Strategic Economics, and Cambridge Systematics, undertook a community-based urban design and transportation planning process to develop a concept plan for the Downtown Berkeley BART Plaza and Transit Area.

The primary goal of the project has been to create a comprehensive vision for public improvements to the transit plaza and vicinity that meet the needs of Berkeley's changing and growing population, while better meeting the needs of existing activities and users. The study has developed a concept-level set of capital improvements for the BART Plaza and the surrounding area. These are focused on short-term improvements that can be made to create an improved environment now, while setting the stage for greater improvements in the future.

Figure 2.1: View of the BART Plaza looking north.

Figure 2.2: Aerial view with outline of Study Area.

2.1 Study Area and Process

Study Area

The Study Area for the Downtown Berkeley BART Plaza and Transit Area Urban Design Plan includes the area along Shattuck Avenue between Allston Way to the south and Addison Street to the north, including the interaction with the side streets connecting with Shattuck Avenue. Some of the design decisions within the Study Area have implications for the surrounding area, and while the detailed design focus of the plan is on the Study Area, consideration has been given to the surrounding areas as well.

Community Involvement

The study process has involved broad community input and involvement in decision-making. A Technical Working Group (TWG), including City and transit agency staff, has met throughout the process to review work products and help guide the development of sketch alternatives and the final concept plan. A Citizens Advisory Committee (CAC), including a range of stakeholders, has also met to review work products and help

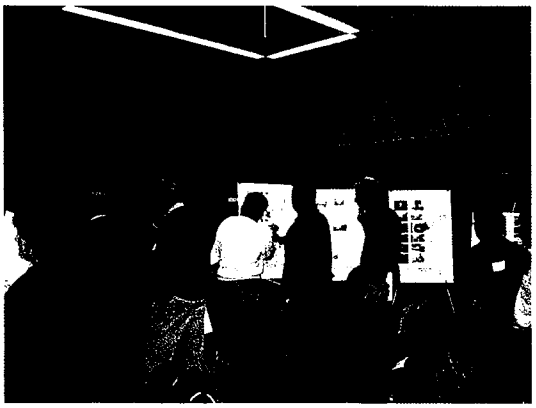


Figure 2.3: Community Workshop 1, in January 2006, invited participants to comment on the existing conditions and identify issues.

Figure 2.4: Community Workshop 2, in April 2006, provided for participants to give feedback on large decisions as well as design details.

Figure 2.5: The Downtown Berkeley BART Plaza and Transit Area is a multi-modal transportation hub, combining pedestrians, bikes, buses, and BART with a key auto route in the city.

shape the community workshops. Two community workshops (one in January and one in April) have provided the opportunity for residents and stakeholders to provide direct interaction with City staff and the consultant team around key design and planning decisions. Additional public input was sought at Transportation Commission and Downtown Area Planning Advisory Committee meetings.

Downtown Area Plan Coordination

Throughout the design process, decision-making has been coordinated with the ongoing Downtown Area Plan (DAP) process. The Downtown Area Plan will be a long-range land use and transportation plan for the broader Downtown Area. The DAP will include technical analysis of some of the larger circulation issues raised during the course of this study, such as the configuration of Shattuck Avenue and potential modifications to side streets. The improvements recommended in this concept plan are consistent with the DAP process outcomes to date. The final implementation of the concept plan should continue to be coordinated with the DAP process in order to ensure consistency.

2.2 Study Goals and Objectives

The following project goals and objectives were identified by members of the TWG, CAC, City Staff and the consultant team and presented to the general public for review and input. The project goals and objectives have guided the development of the concept design alternatives and the improvements recommended in the final concept plan.

Goal 1: Improve the Plaza area's function as a universally accessible transportation hub.

The Downtown Berkeley BART Plaza area is heavily used by transit riders, pedestrians, bicyclists, and motorists. It provides one of the primary access points to UC Berkeley, and to the residential, commercial, employment, and cultural uses located in Downtown Berkeley.

- **Enhance multi-modal transit access to expand ridership.** This may include reorganizing curb functions to enable timed transfers between buses and shuttles and BART, facilitate pick ups/drop offs, and improve surface transit waiting areas.
- **Increase accessibility for pedestrians and bicyclists.** This includes the incorporation of universal access design standards (including access for those with visual, hearing, as well as mobility disabilities) and

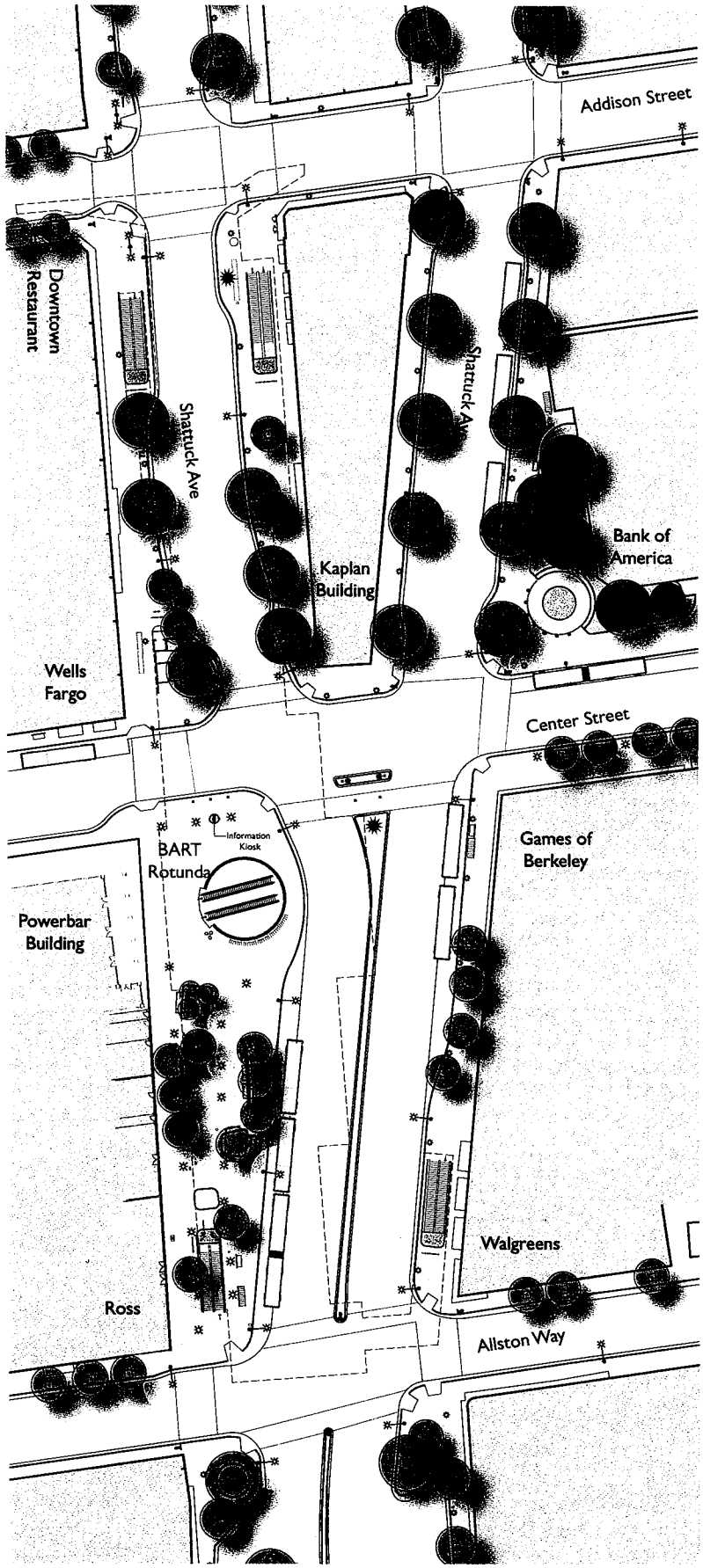


Figure 2.6: Existing layout of the study area.

Figure 2.7: The plaza design has had minor modifications over time.

Figure 2.8: BART provides much of the activity on the plaza.

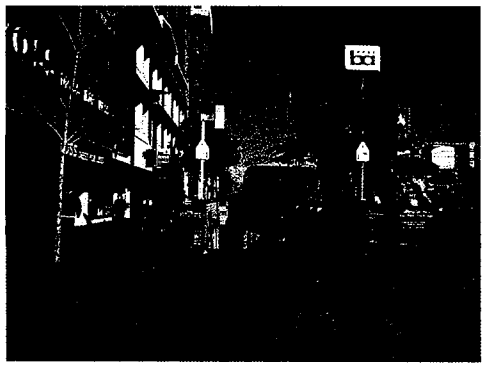


Figure 2.9: The existing plaza lacks legibility to help orient users and facilitate transit access and pedestrian circulation.

LEGEND

- Wall and visual barrier
- Bike Racks
- Planter
- Pedestrian Scale Lighting
- Trees
- Bus Shelter
- BART Station (below grade)
- Public Art
- Street Lighting

Figure 2.10: The plaza design should provide opportunities to create a focal point for community activity.

supportive infrastructure (including pedestrian crossings and expanded attended bicycle parking options).

- **Create a transit user-friendly environment and enhance the experience of Downtown's visitors.** This may include way-finding signage and other design elements that make it easy to navigate to and from commercial, cultural, and educational destinations and transit services.
- **Reorganize the public space to accommodate enhanced bus service and other planned developments.** Several transportation and land use changes are planned for Downtown. AC Transit has proposed a new Bus Rapid Transit service that would terminate in Downtown Berkeley, and a hotel/ conference center and museum complex is being planned at Center Street and Shattuck Avenue.
- **Support functional needs of adjacent land uses.** The BART Plaza and Transit Area should provide adequate loading and drop-off curb areas, as well as providing opportunities for sidewalk café seating or vending.

Goal 2: Create a high-quality, memorable place.

This site provides a unique opportunity to create a landmark at the center of Berkeley. While access and the particular needs and activities of users are important, creating a place that is a joy to be in must be in the forefront of the design.

- **Create a focal point for community activity.** The BART Plaza area provides an opportunity to create a lasting and lively center for residents, workers, students, and visitors as both a key element within the Downtown and within the larger community. The design plan should understand the needs of these users and make a space that is comfortable and welcoming for everyone.
- **Improve the aesthetic quality of the Plaza area.** The design plan for the BART Plaza and Transit Area should create public spaces that are beautiful and highlight the role of the BART Plaza and Transit area as a landmark in Downtown Berkeley.
- **Incorporate Sustainable Design and Construction Techniques.** The design plan should incorporate natural elements and construction materials and techniques that are sustainable wherever possible and provide a benefit to the environment through the approach to landscaping, urban design, and architecture on the site.
- **Reflect History of the Downtown Area.** The design

should reflect the historic resources in the Downtown Area and be in character with the rest of the Downtown.

- **Reflect the Identity of the Community.** Opportunities to incorporate public art and unique visual elements should be pursued whenever possible.

Goal 3: Support the environmental, cultural, social, and economic development goals for Downtown Berkeley.

The BART Plaza area presents an opportunity to help further the environmental, cultural, social, and economic development goals for the Downtown Area by creating an inviting and attractive public space to a wide variety of users.

- **Improve safety and amenities for plaza users.** The design plan should explore features to improve security (improved sight lines, decreased nuisance areas, lighting etc.) and enhance amenities for plaza users (such as seating, a public toilet, and climatic comfort through landscaping, etc.).
- **Support existing businesses, civic institutions, and new economic development.** The design plan should incorporate landscape and streetscape improvements that create a safe and attractive place to travel through or wait in, and that meet the needs of surrounding businesses.
- **Provide public space for social, cultural, and community activities.** To the extent possible, the design plan should consider opportunities for creating spaces for public art displays, performances, or other social and cultural gatherings.
- **Activate ground floor commercial space.** Facilitate the ability for ground floor commercial uses to optimally provide goods and services to the variety of plaza users.

Figure 2.11: The plaza design should support opportunites for performances, art display or other social gatherings. (Source: Downtown Berkeley Association)

2.3 Design Considerations

Site History

The existing design of the BART Plaza and Transit Area is the result of incremental improvement projects over the course of the last 35+ years. The current Study Area bears little resemblance to historic photographs taken in the early 1900s, other than several buildings that remain today. In the early part of the last century, Shattuck Avenue was an important railroad route, and railroad tracks occupied the center of the street. A station was located on the north side of Center Street, at the present location of the Kaplan Building. Trolleys ran along University Avenue connecting to the Berkeley Ferry Pier and providing access to the Downtown and the university campus. The primary function of the area was as a transit hub and vital downtown shopping district.

Following the removal of the railroad tracks on Shattuck Avenue, a park was constructed in the middle of the street, with traffic lanes on either side. Shattuck Square was redeveloped with small-scale retail and office buildings. The area lost some of its function as a transit hub, while still retaining its retail and entertainment character.

With the construction of the BART system in the late 1960s and early 1970s, the function and character of the area changed again. The BART Plaza on the west side of Shattuck Avenue consolidated the main public space with the existing sidewalk and added the highly visible rotunda structure. The consolidation of the plaza space caused automobile circulation to be altered, adding a C-curve for southbound traffic. BART reintroduced the transit hub function to the area, although beyond the plaza itself, much of the street design was more oriented towards automobile use than pedestrian and local transit functions. The rotunda entry to BART created an object that terminates the view down southbound Shattuck Avenue, similar to how the "off set" at University Avenue terminates the northbound view.

Over the past 15 years, the City has made a conscious effort to improve the pedestrian circulation functions in Downtown through a series of streetscape projects. The south side of Center Street between Shattuck Avenue and Oxford Street was improved to provide a key link between the University and the Downtown. The widened sidewalks, pedestrian lighting, and urban design details set an important precedent that has been followed up with the Downtown Streetscape improvements project, which added pedestrian lighting and new trees between University Avenue and Kittredge Street along Shattuck Avenue.

Figure 2.12: Historically, Shattuck Avenue was an important railroad route.

Figure 2.13: Historical picture of Shattuck Avenue looking North.

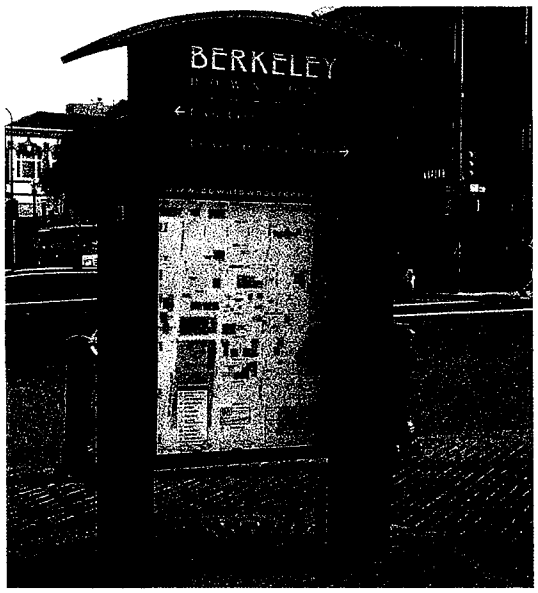


Figure 2.14: Recent plaza improvements have included signage and lighting and landscaping improvements along Center Street and along Shattuck Avenue.

Physical and Environmental Factors

There are important physical and environmental characteristics of the Study Area that contribute to the design process. These factors inform decision-making about both long- and short-term design options for the site and contribute to the recommendations in the concept design described in Section 4 of this report.

Scale of Study Area and Public Spaces

The scale of the BART Plaza and Transit Area informs the potential use programs in the Study Area. Figure 2.15 below illustrates the scale of the Study Area in relation to some other important Bay Area multi-modal hubs. These studies help show some of the limitations on the BART Plaza. While the plaza is bigger than the 16th Street Mission BART Plazas, it is considerably smaller than the Powell Street BART Plaza and the Ferry Plaza in San Francisco. The scale of the plaza constrains the ability to program the public spaces, and makes long-term options that create additional public spaces attractive (such as on Center Street between Shattuck Avenue and Oxford Street).

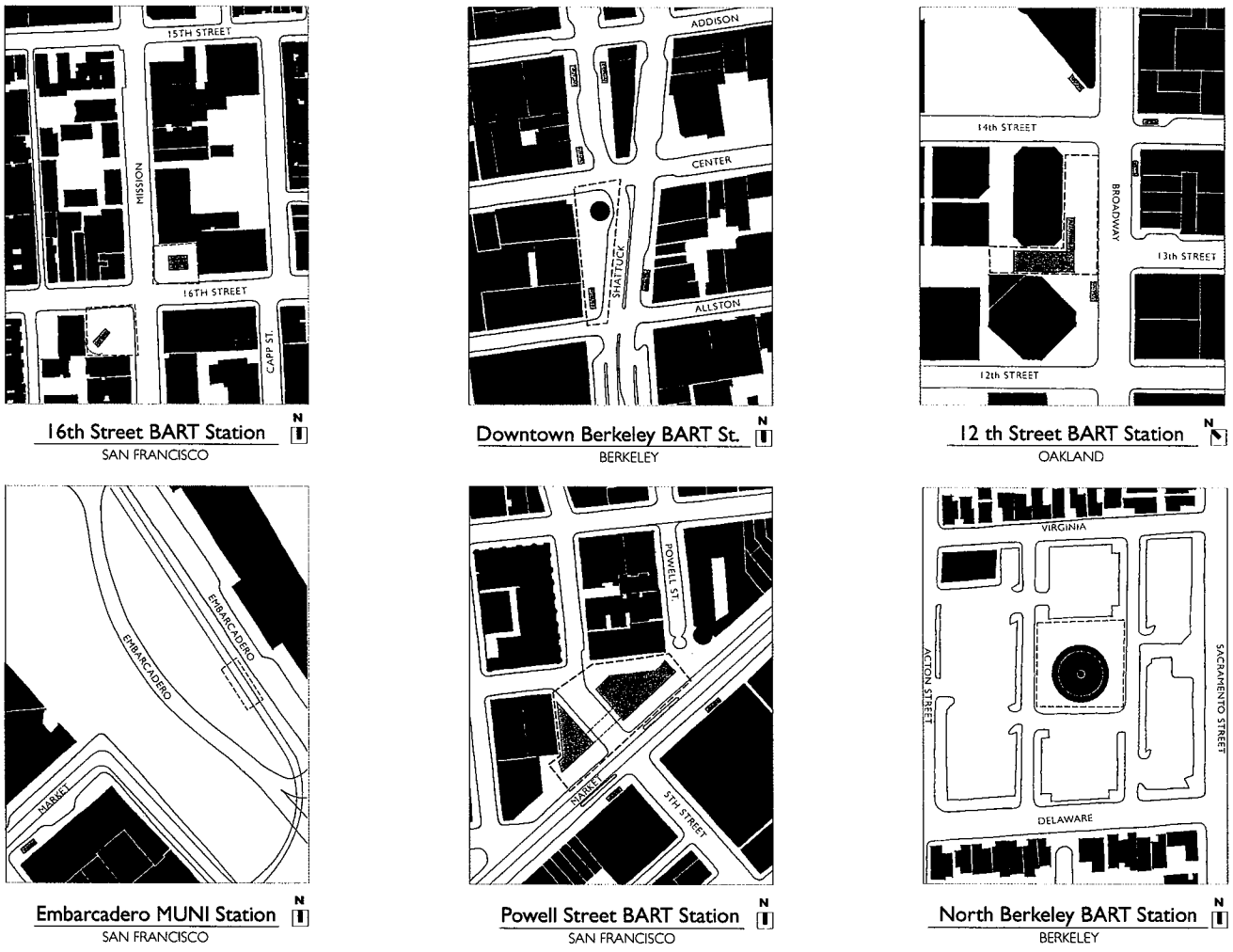


Figure 2.15: Scale comparisons of the Berkeley BART Plaza with other important Bay Area multi-modal transportation hubs.

Shattuck Avenue Cross Section

There are two distinct cross section conditions on Shattuck Avenue in the Study Area. The area along the Shattuck Avenue right-of-way on the block between Allston Way and Center Street is extremely wide—ranging from 160 feet at Allston Way to almost 200 feet at Center Street. This block has six lanes of two-way traffic with a raised median and bus loading areas on both sides of the street. The roadway cross-section is typically 85 feet wide in this block. While the crossing at Center Street is 105 feet wide; there is an ample pedestrian refuge at this point. The width of the roadway causes the block to lack a cohesive identity, and it suffers from poor visual and physical connection between the two sides of the street.

Strong retail streets benefit from visual connections between stores on opposite sides of the street and sidewalks that are appropriately proportioned to the activities that take place along them. The retail along this block of Shattuck Avenue is challenged by the width of the Shattuck Avenue right-of-way and a weak pedestrian environment.

North of Center Street, Shattuck Avenue splits to form a couplet continuing to University Avenue. Three lanes of northbound traffic run on the east side of Shattuck Square, while three lanes of southbound traffic run on the west leg of the street. Both legs of Shattuck Avenue have curb parking or bus loading lanes. The east leg is narrower, with a 78-foot wide right-of-way, while the west leg has a right-of-way 107 feet wide.

Looking north, the west leg of Shattuck Avenue frames a picturesque view with the Berkeley Hills in the background. Looking south, this view is terminated by the BART rotunda.

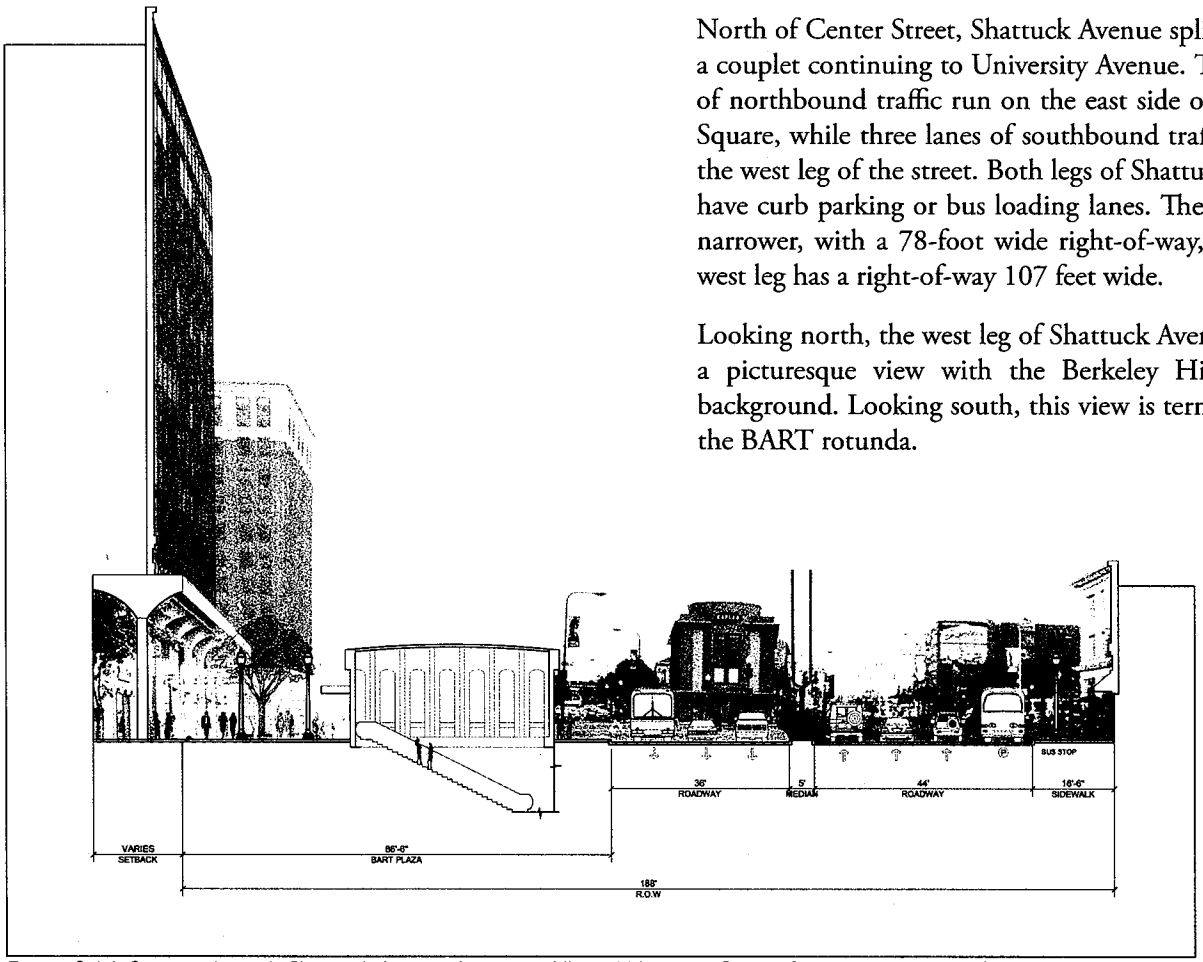


Figure 2.16: Section through Shattuck Avenue between Allston Way and Center Street. This area suffers from a poor visual and physical connection between the two sides of the street.

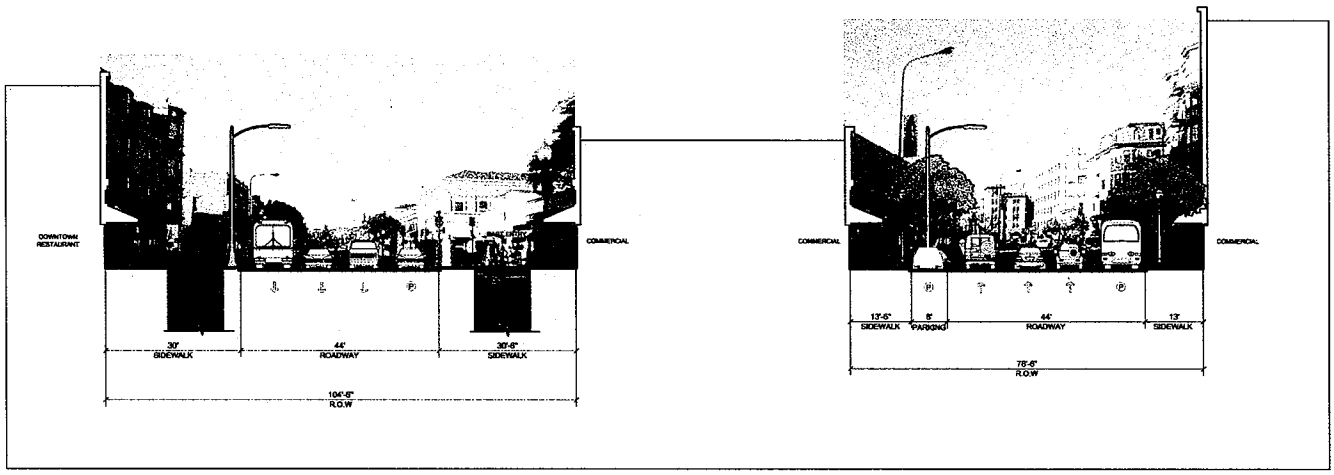


Figure 2.17: Section through the Shattuck Avenue couplet, north of Center Street continuing to University Avenue.

The east leg of Shattuck Avenue, in contrast, is framed by buildings looking north, and does not have a strong terminus in the southern direction. The different characters of these two legs suggest that varying treatments to the two sides of the Shattuck Square block may be appropriate.

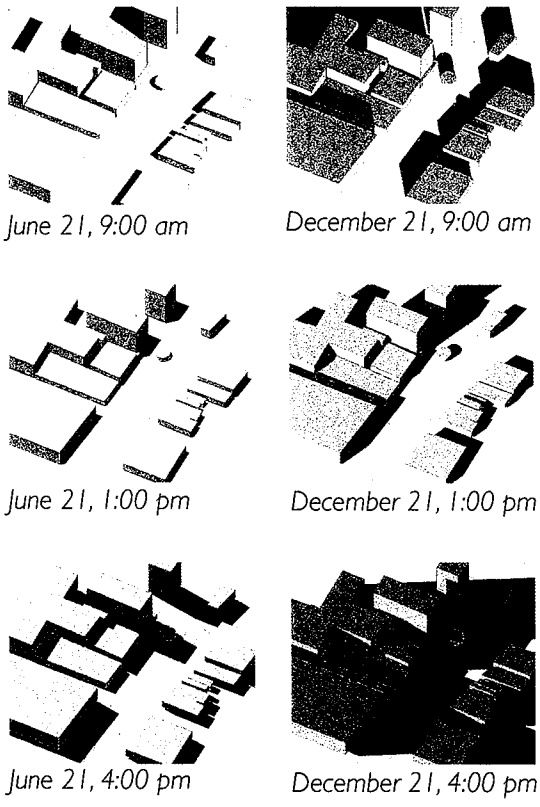


Figure 2.18: Shadow study showing the BART plaza at the summer and winter solstices.

Solar Access

Solar access can be an important factor in creating a successful open space, especially in the winter. The existing BART Plaza has good morning and mid-day solar access year round. In the afternoon, the existing plaza is often in shade, but does have some late afternoon solar access. A sketch solar analysis done for this project identified the potential for improved solar access if the plaza were shifted to the east side of Shattuck Avenue, a concept that is discussed more fully in Section 3 of this report. Shifting the plaza, however, would result in decreased morning solar access. Because the plaza is generally oriented on the north-south axis, there will always be good mid-day solar access, regardless of the surrounding building heights.

Strawberry Creek

Presently, Strawberry Creek runs under Allston Way in a culvert and is integrated into the underground structure of the BART station as it crosses Shattuck Avenue. There has been ongoing interest in Berkeley around the concept of day-lighting the creek along Center Street as part of a public open space. This project has not looked at the feasibility of this idea, and the creek needs to be further studied in sufficient detail—both in terms of technical analysis and urban design—before this idea can be implemented.

2.4 Access Considerations for All Transportation Modes

Downtown Berkeley is one of the most heavily used transit hubs in the Bay Area and is at the heart of an active downtown with commercial, office, cultural, civic, entertainment, and residential uses. Access to the BART Plaza and Transit Area is complex and integrated. Buses, pedestrians, bicycles, service vehicles, and autos all interact in a highly constrained area. This section of the report deals with the access needs of each mode and the resulting implications for design.

Pedestrian and ADA Access

The existing pedestrian network provides a good base level of connectivity and circulation; however improvements to the Study Area could improve pedestrian access significantly. All sidewalks in the area meet ADA standards and all of the intersections have marked crosswalks with pedestrian signals, while others—such as Shattuck Avenue/Kittredge Street—also have pedestrian countdown signals. Some signals, including the Shattuck Avenue/Center Street intersection have audible pedestrian signals as well.

A primary issue is the constrained waiting areas at surface transit stops. All bus stops in the area create congestion and conflict points for pedestrians. Additionally, the space constraints of these waiting areas leave little space for amenities such as benches and shelters. The stops on the east side of Shattuck Avenue, including the stop south of Center Street, in front of Games of Berkeley and the stop on the north side of Center Street, in front of the Wells Fargo Bank to the west of Shattuck Avenue, are particular problem points.

Sidewalks in the area are generally wide enough for the pedestrian traffic, with pinch points in key locations, such as around the BART entries and at bus stops. The sidewalk on the north side of Center Street west of Shattuck Avenue is only nine feet wide, which is narrow to accommodate existing pedestrian traffic, and is especially, constrained at the bus stop. The narrow width makes it difficult to provide amenities for bus riders and pedestrians. The result is a low-quality bus waiting area, with only a bench, and a low-quality pedestrian environment. Another important pinch point is on the east side of Shattuck Avenue, just south of Addison Street. The current 12 foot sidewalk is narrow given the existing Bear Transit stop and adjacent businesses.

The existing sidewalks on the west side of Shattuck Avenue are relatively wide, but are constrained in places by existing street furniture, such as bike racks and newspaper boxes. For example, adjacent to the BART entry at Shattuck and Allston Way, there is approximately 16 feet between the low wall of the entry and the adjacent building. However, the bike racks, pedestrian lights,

Figure 2.19: Pinch points along sidewalks at bus stops create congestion and conflict points for pedestrians.

Figure 2.20: Constrained waiting areas leave little space for amenties such as shelters and benches.

Figure 2.21: Bike racks, pedestrian lights, trash cans, and newspaper boxes reduce the effective width of the sidewalks making them further constrained.

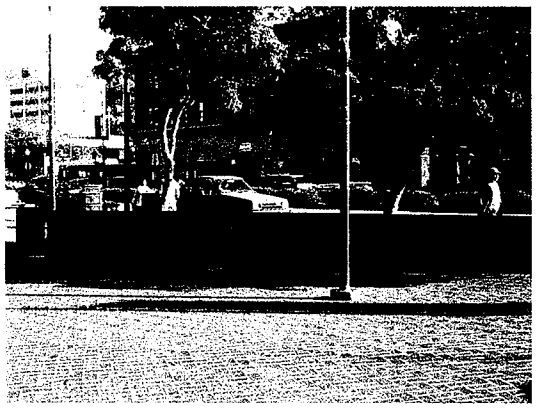


Figure 2.22: The existing brick paving at the Berkeley BART Plaza does not cause an accessibilty concern, but can be hard to maintain.

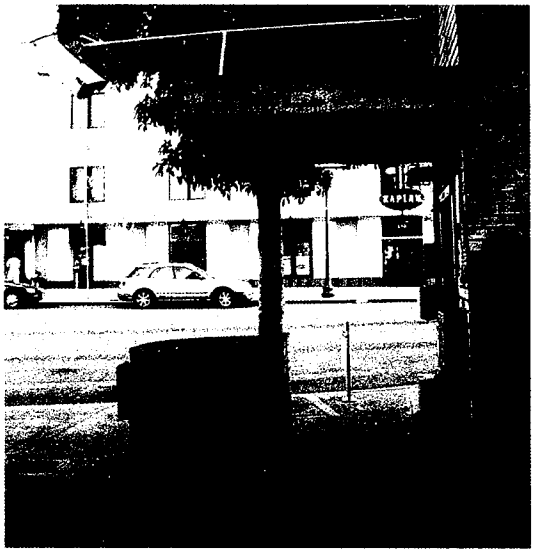


Figure 2.23: The only BART access elevator is located on the northwest corner of the Shattuck Avenue/ Center Street intersection.

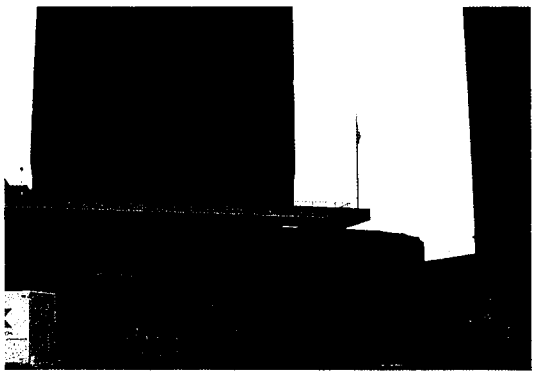


Figure 2.24: The BART rotunda, the main entry/exit to the station, lacks clear signage and makes orientation for BART patrons difficult because of its indirect relationship to the street.

and newspaper boxes reduce the effective width of the sidewalk to approximately nine feet.

The surface of the primary plaza area is paved mainly with brick, while surrounding areas are paved with concrete. The brick is well-installed and level, and there are no accessibility issues in the plaza area. However, it is hard to maintain. Some, but not all, curb ramps meet the current city standard for ADA and include detectable tiles. Most curb ramps point directly in the direction of the crosswalks, but there are some issues in this regard, particularly at the corner of Shattuck Avenue and Center Street, that can be disorienting to visually impaired users. The east side of Shattuck Avenue at Center Street also has diagonal curb ramps on both the north and south side of the intersection.

The elevator access to the BART station is located on the northwest corner of the Shattuck Avenue/Center Street intersection, making this a primary consideration in addressing issues of ADA accessibility. Access to this elevator is problematic for wheelchair users and others due to a low semi-circular wall structure containing stand pipes a few feet from the elevator door, resulting in ingress/egress conflicts. There have been past discussions about adding a second elevator to the BART station with a new entry on the east side of Shattuck Avenue as part of the station expansion plans (discussed further in the Transit Access section of this document), and to the extent feasible, this has been explored as part of this project.

There is a lack of legibility of the physical environment. All of the BART entries except for the stair on the northwest corner of Center Street and Shattuck Avenue point away from the rotunda structure, one of the most recognizable landmarks in the Downtown, and pedestrians exiting from these points often have a difficult time orienting themselves. Exiting the rotunda structure can also be disorienting as there is no signage or a clear visual relationship to streets or other landmarks. Likewise, the lack of prominence of secondary entries channels more pedestrian activity to the rotunda. Dispersal of some of the BART-bound pedestrian traffic from the rotunda entrance to the secondary entries could improve overall circulation in the area. The map in the existing kiosk at Center Street, adjacent to the rotunda, aids in way finding. Planned bus arrival information with the new Rapid Bus Service will also aid orientation.

Bicycle Access

Bicycle access to and within the Study Area is good, however there is potential for improving the existing surface bike parking and improving access to an expanded concourse-level attended bike parking in the BART station. Bicycle racks are dispersed throughout the Study Area, with concentrations at the BART rotunda and adjacent to the BART entry on the west side of Shattuck Avenue at Allston Way. Bike parking is heavily used at

all times, although there are a high number of vandalized and/or abandoned bikes, which reduces overall capacity and negatively impact the perception of safety in the plaza area. The dispersal of bike parking throughout the plaza area helps meet the various needs of bicyclists, including accessing retail and entertainment uses as well as transit.

The existing bike station at the southern end of the BART station concourse level is oversubscribed, and BART would like to expand and relocate the station. BART has worked with Robin Chiang Architects and Strategic Economics to explore the feasibility of reconstructing the facility within the BART station as well as the feasibility of relocating the bike station to an existing street-level storefront. If reconstructed within the BART station, the bike station would continue to be located at the southern end of the station on the concourse level. This suggests the potential for improvements to the southern BART entries and the surrounding plaza areas to facilitate bike use.

Center Street currently has striped bike lanes west of Shattuck Avenue, and striped bike lanes between Shattuck Avenue and Oxford Street are included in the City's 2000 Bike Plan. Milvia and Oxford Streets, one block west and east of Shattuck Avenue, respectively, are primary north-south bike routes in the broader area, meaning that Shattuck Avenue does not need to serve as a primary bike route. However, bicyclists do use Shattuck Avenue at times, so the bicycle access functions of the street are an important consideration in any modifications to the street section.

Bus Access

One of the primary functions of the Study Area is providing access to and connections between various modes of public transportation. Surface public transportation in the Study Area includes AC Transit buses, and Bear Transit (UC Berkeley) and Lawrence Berkeley National Lab (LBNL) shuttles. Downtown Berkeley is AC Transit's second-busiest transit point in the entire East Bay, after Downtown Oakland. Figure 2.28 shows existing bus routes and stop locations.

AC Transit is currently developing plans for several bus enhancements in the Study Area. A "Rapid" service, similar to existing service on San Pablo Avenue, will be introduced in Fall 2006. Improvements will include visible signage and shelters, and two information kiosks that display real-time arrival information for all bus routes serving Downtown Berkeley. The Rapid will replace the existing 40L service, and will lead to some additional route modifications in the Downtown Area.

AC Transit is also developing plans for Bus Rapid Transit (BRT) in the Study Area. Downtown Berkeley would serve as the northern terminus for a BRT line connecting Downtown Berkeley with Downtown Oakland via Telegraph Avenue and

Figure 2.25: Surface bike parking is dispersed throughout the study area with concentrations at the BART Rotunda and adjacent to the BART entry on the west side of Shattuck Avenue at Allston Way.

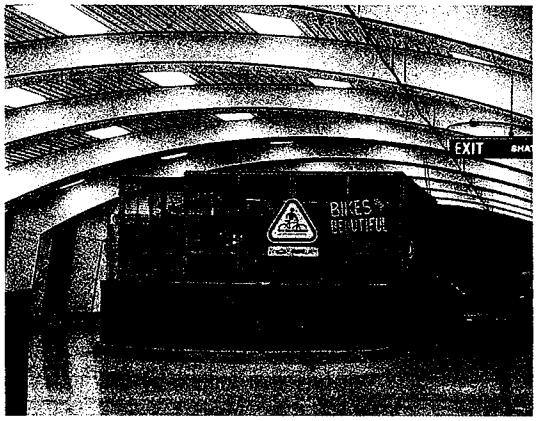


Figure 2.26: The existing bike station located on the concourse level at the southern end of the BART station is oversubscribed.

Figure 2.27: Surface public transportation in the study area includes AC Transit buses, and Bear Transit (UC Berkeley) and Lawrence Berkeley National Lab (LBNL) shuttles.

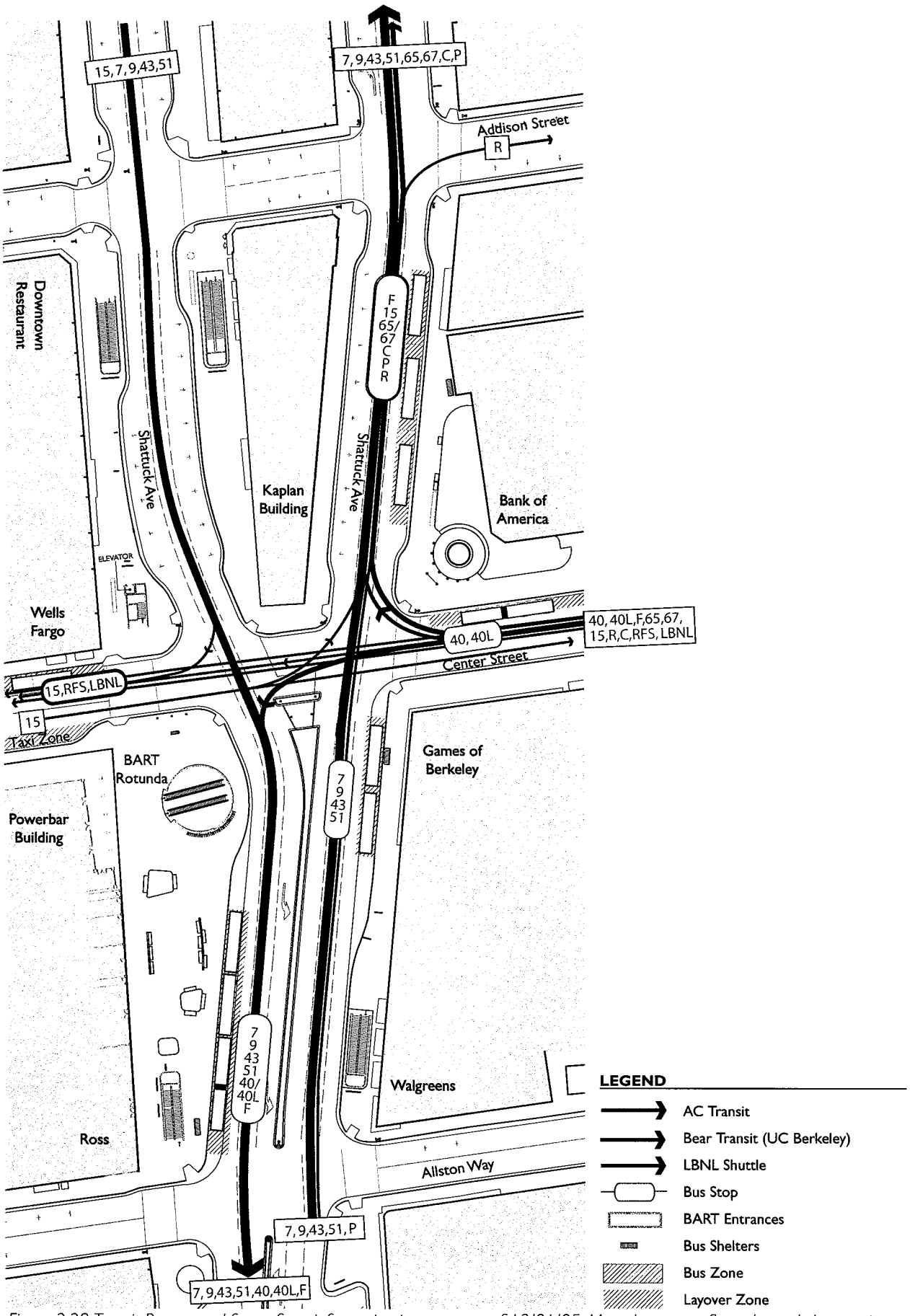


Figure 2.28: Transit Routes and Stops. Stop information is current as of 12/01/05. Map does not reflect planned changes in service.

continuing south to San Leandro. The BRT system would include enhancements intended to improve bus functionality, travel time, and reliability. These improvements include:

- Exclusive bus lanes incorporating local service as well as the BRT line. It is likely that all of the AC Transit service in Downtown Berkeley could be incorporated into exclusive lanes;
- Raised platforms to facilitate boarding and alighting. Platforms would be raised approximately seven inches above the normal curb height in order to provide a level floor with buses. This requires ADA-compliant ramps at either end of platforms to bring patrons back to ground level; and
- Improvements to traffic signals and fare collection systems in order to improve running times.

In all options being considered by AC Transit, BRT is accommodated in center-running exclusive lanes within the Study Area. One option has BRT traveling in both directions on Shattuck Avenue, while in the other, the BRT runs only in a northbound direction on Shattuck Avenue before circling back to the south via Oxford Street. In both options, the BRT "stations" are located between Addison and Center Streets. This creates some challenges in terms of pedestrian connections to BART, since the closest BART entry (at Shattuck Avenue and Addison Street) is not particularly visible, and it is necessary to cross Shattuck Avenue to access the existing BART elevator.

The planned BRT system will have some impacts on auto circulation in the Study Area. The center running configuration will result in the removal of several left turn lanes: northbound Shattuck Avenue onto Center Street and Addison Street, and southbound Shattuck Avenue onto Center Street and Allston Way. Some BRT variations also remove the left turn lane on northbound Shattuck Avenue onto Allston Way. While the effect on congestion and Level of Service (all intersections in the Study Area currently operate level of service A or B)[1] is not significant, the removal of left turn lanes will make access to Downtown destinations more circuitous. The City's plans for a Parking Information System with better signage to parking lots will help with this need.

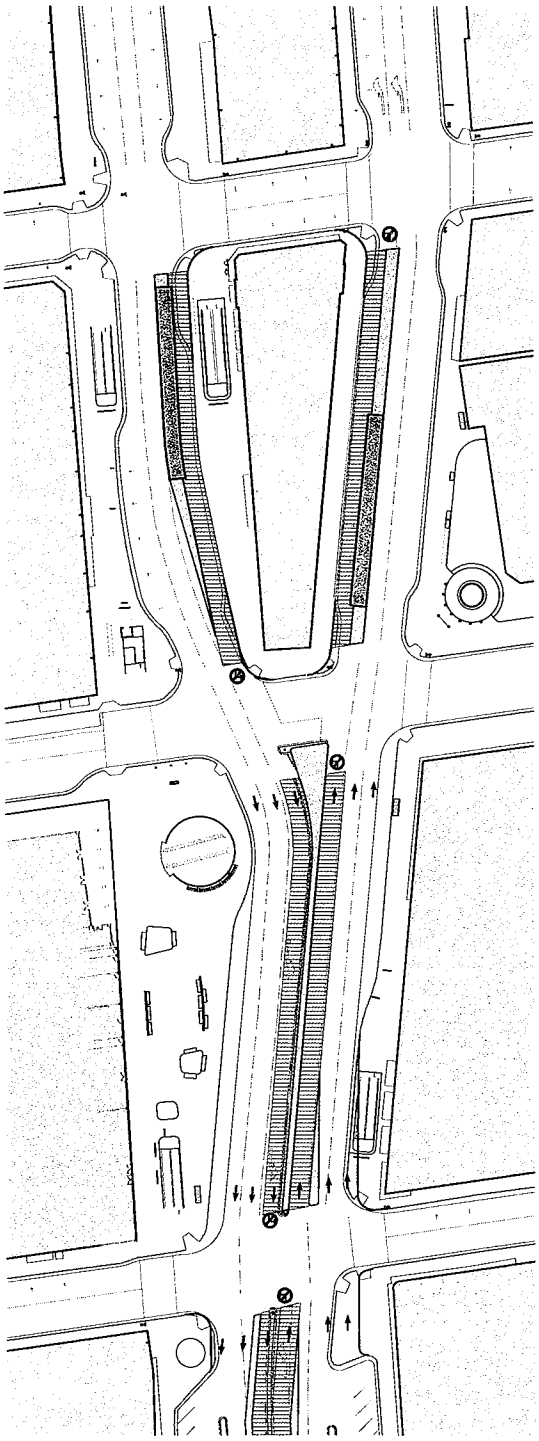


Figure 2.29: The diagram shows one of AC Transit's potential configurations for the BRT system with center running bus lanes and consolidated loading areas. This configuration results in the prohibition of several left turn movements within the study area.

[1] Level of Service (LOS) is a method for analyzing the performance of an intersection in terms of automobile efficiency. Letter grades ranging from A (free flow—no delay) to F (stopped traffic) are given to provide a qualitative rating of intersection performance

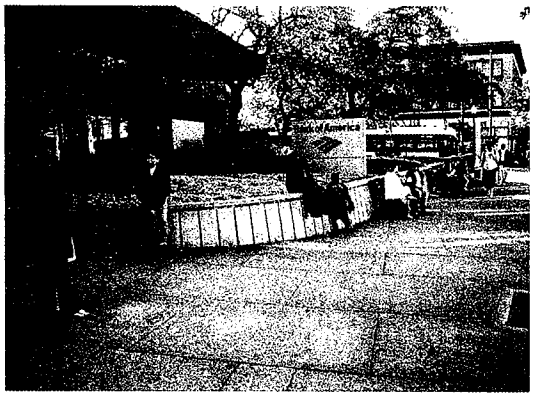


Figure 2.30: BART has studied the possibility of a new entry on the northeast corner of Shattuck Avenue and Center Street incorporated into potential development on the Bank of America property.

Figure 2.31: Secondary entries with only stair access have the potential to be retrofitted with escalators to increase their use and reduce the demand on the rotunda entry.

BART Access

There are currently six entries to the Berkeley BART station within the Study Area.

Entry Location	Vertical Circulation
West side Shattuck south of Center (Rotunda)	Two escalators
West side Shattuck (SB) north of Center	Elevator + Stair with returns
West side Shattuck (SB) south of Addison	Straight Stairs with central divider
East side Shattuck (SB) south of Addison	
West side Shattuck north of Allston	
East side Shattuck north of Allston	

Table 2.1: BART entry locations and vertical circulation.

BART has studied the possibility of an additional entry on the northeast corner of Shattuck Avenue and Center Street incorporated into potential development on the Bank of America block. While this entry is technically feasible, the cost of tunneling and vertical circulation may make it economically infeasible. However, a new entry as part of a development project would greatly increase transit access and could lead to creative approaches to reconfiguring existing entries. Potential reconfiguration of the roadways in the Study Area will allow alternative solutions for providing an additional BART entry, such as the southeast corner of Center Street and Shattuck Avenue, or in the median of Shattuck Avenue. These solutions would be costly but could radically alter the Study Area to help achieve the project goals and objectives.

Other than the main rotunda entry and the elevator entry, all existing BART entries include only stair access. One possible way to increase the capacity of the station would be to retrofit other entries with escalators. One escalator could be added to each existing stair entry with the direction changing to serve peak flows either entering or exiting the station. This might increase the use of the northern entries and reduce the demand on the rotunda entry (See Figure 2.32 for volumes of pedestrian traffic exiting the BART Entries). All BART entries are gated at night, with all but the rotunda gated at the bottom of the stairs, leading to security and vandalism problems.

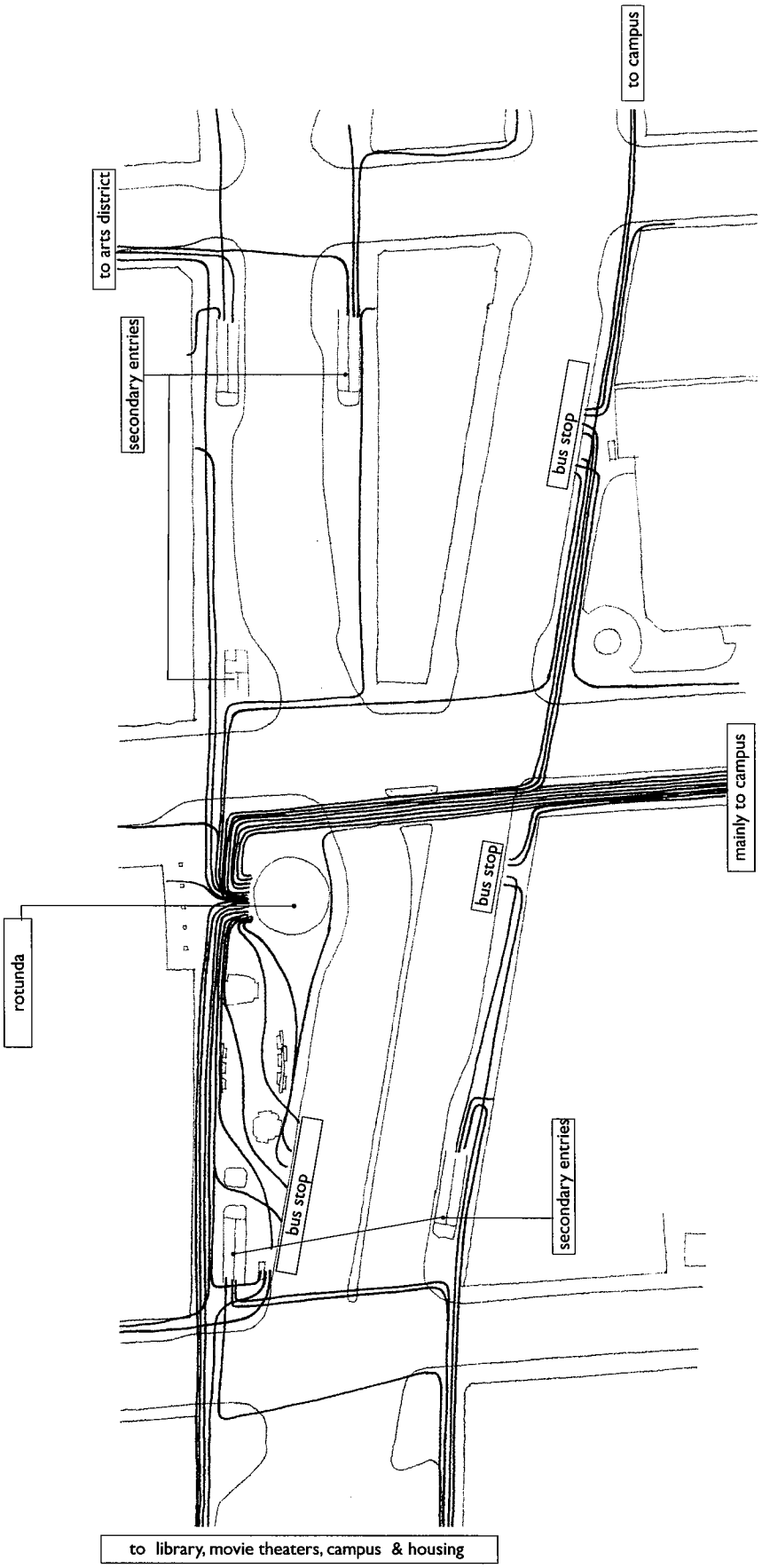


Figure 2.32: Pedestrian traffic exiting the BART entries.

Auto Access

Auto access is a broad category that includes several areas of consideration: (1) vehicular circulation and safety; (2) potential changes to the Shattuck Avenue Couplet; (3) auto access to transit; and (4) general considerations regarding auto access to serve the Downtown Area.

Vehicular Circulation and Safety

The streets in the Study Area serve a vital function in carrying the vehicular traffic for the city. Shattuck Avenue is a major north-south street connecting from South Berkeley, and carries traffic from the Southside area around the UC Berkeley campus. Vehicular traffic peaks in the PM commute hour, and traffic is bi-directional, meaning that traffic flow is basically even in the northbound and southbound directions at most times of day. (See Figure 2.34 for details of the PM Peak traffic flows).

Throughout the Study Area congestion is not a major concern. All intersections along Shattuck Avenue between Allston Way and University Avenue currently operate at level of service A or B at all times of day (Table 2.2). This means that delays at intersections due to traffic are not a substantial impediment to traffic flow. The existing traffic on the east-west streets is relatively light; these streets are not arterial streets, but serve to access properties and parking garages within the Downtown Area. Current City policy—expressed in the current *Downtown Area Plan* (1995)—cites LOS D as the lowest acceptable LOS for any intersection in the Downtown Area. This leaves a good deal of flexibility for potential changes to roadway configuration to meet project goals and objectives.

Analysis of traffic collision data from December 1999-December 2004 (the latest compiled data that is available) shows a relatively modest level of collisions. In total, there were 77 collisions in the Study Area in this time period, of which 44 resulted in an injury and none of which resulted in a fatality.

Figure 2.33: Vehicular traffic throughout the study area operates at level of service A or B with little delay at intersections due to traffic.

Intersection	AM Peak Period		Midday Period		PM Peak Period	
Shattuck Avenue at:	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
University Ave (West)	10.9	B	6.6	A	9.0	A
University Ave. (East)	12.0	B	15.9	B	14.5	B
Addison Street (West)	5.2	A	7.6	A	7.8	A
Addison Street (East)	4.8	A	5.1	A	6.5	A
Center Street (West)	8.9	A	10.9	B	8.7	A
Center Street (East)	9.0	A	4.6	A	6.3	A
Allston Way	3.9	A	6.8	A	6.9	A

Source: "Shattuck Operations Analysis—Final Memorandum", DKS Associates, February 14, 2005

Table 2.2: Vehicular Level of Service at Study Area intersections

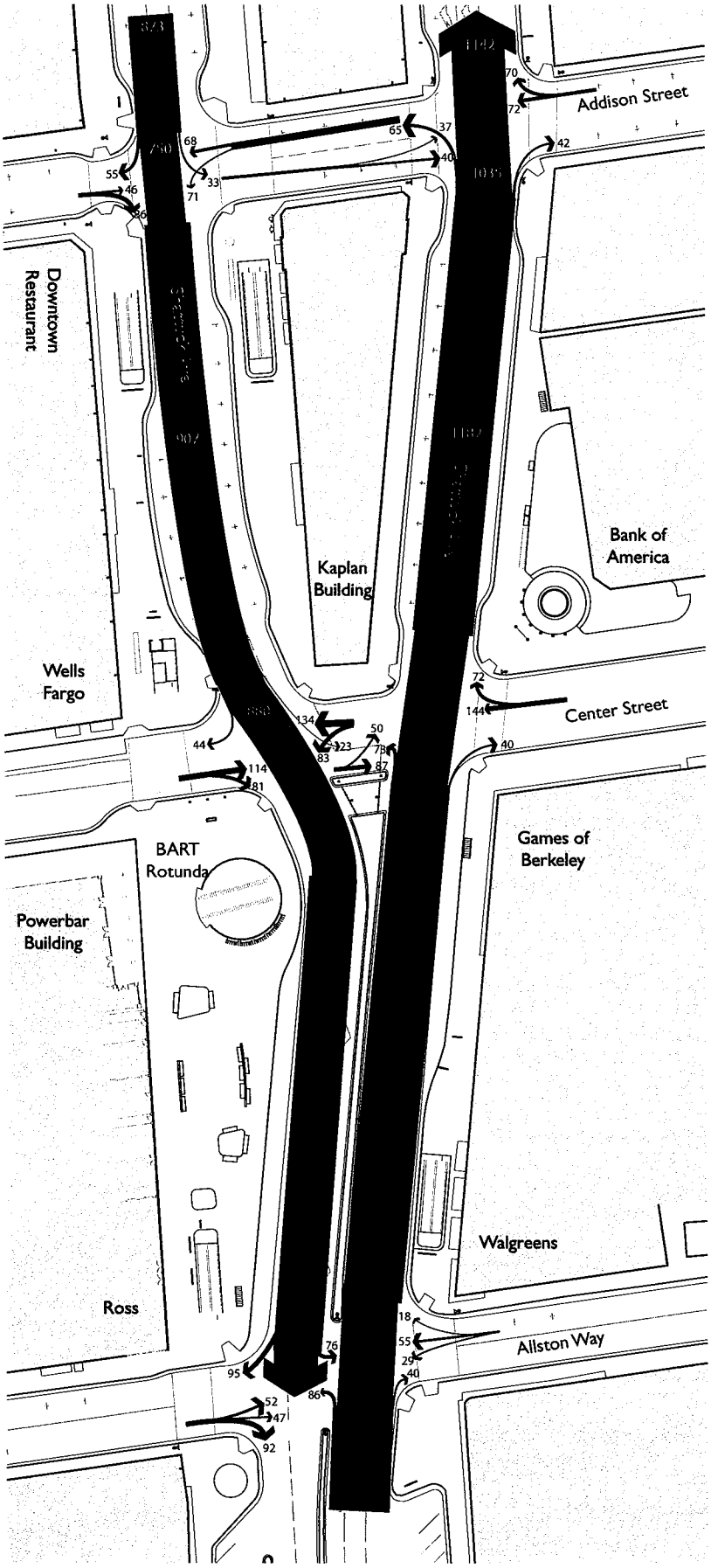


Figure 2.34: PM peak hour traffic flow in study area

Figure 2.35: The limited loading and drop-off areas in the study area means service vehicles sometimes pull up onto the plaza.

(Since this period, however, there was a pedestrian fatality at Shattuck Avenue and Allston Way, in which a pedestrian was struck in the crosswalk.) The greatest concentration has been around the Shattuck Avenue/Center Street intersection, with 25 collisions, 14 of which resulted in injuries, and the Shattuck Avenue/Allston Way intersection, with 37 collisions, 23 of which resulted in injuries. For an area with so much pedestrian, bicycle, and vehicular traffic, there have been remarkably few collisions that have resulted in an injury to a pedestrian (nine collisions) or a bicyclist (five collisions, all clustered around the Shattuck Avenue/Center Street intersection). Possible explanations for the low level of traffic collisions include: (1) the slow travel speeds (generally 15-27 mph) and high volumes in the Study Area cause motorists and others to proceed with caution at intersections; or (2) the existing improvements in the area, such as the median nose at Center Street and pedestrian signals, improve pedestrian safety.

Despite the generally good operating conditions, there are several areas of concern regarding vehicle circulation in the Study Area. Some of these issues will be addressed in this project, while others are issues that would be better addressed through traffic enforcement or long-range planning for the Downtown Area. Issues include:

- **Turning Vehicles At Times Block Through Lanes:** On southbound Shattuck Avenue, the large volume of pedestrians crossing the street frequently block turning vehicles, which in turn block through lanes. This particularly impacts operations at Center Street, but not to an unacceptable degree. A pedestrian-only phase at this intersection could alleviate this issue to some extent.
- **Illegal Left Turns:** Prohibition on left turns from westbound Center Street onto southbound Shattuck Avenue is frequently violated. This is mainly an enforcement and signage issue.
- **Stopped Vehicles At Times Block Through Lanes:** Insufficient storage space between the two legs of Shattuck Avenue from Center Street to University Avenue causes queued vehicles to spill back into through lanes. This is particularly problematic for left turns off northbound Shattuck Avenue onto westbound Center Street. Illegal left turns off westbound Center Street contribute to the problem.
- **Parking in Through Lanes:** This is particularly common adjacent to BART entries as people pick up or drop off passengers.
- **Last Minute Lane Changes:** Southbound traffic in the far left lane of Shattuck Avenue sometimes makes a last minute maneuver to avoid the left-turn only lane onto

eastbound Allston Way. This is both a traffic flow and safety consideration.

- **Vehicular Sightlines At Times Blocked by Buses:** This is a problem primarily for autos making right turns on red. While this is not directly addressed by the concept design, prohibiting right turns on red in the Downtown Area would address the sightline concern and generally improve pedestrian safety.

Potential Changes to the Shattuck Avenue Couplet

The City has previously studied the possibility of reconfiguring Shattuck Avenue between Center Street and University Avenue to provide two-way access on the west side of Shattuck Square and a local street or bus and pedestrian-only access on the east side. The analysis of traffic impacts does not indicate that the change would have an adverse impact on vehicular circulation in the immediate Study Area. The configuration previously studied by the City was only one of a number of potential roadway reconfigurations. This project has not studied the issue of the Shattuck Avenue couplet in any technical detail, but the ongoing Downtown Area Plan process is likely to analyze and determine the feasibility of this change.

Auto Access to Transit

While BART does not have a park-and-ride facility at the Downtown Berkeley station, kiss-and-ride access is an important component of transit access. Kiss-and-ride capacity in the Study Area is extremely limited and the activity is highly dispersed. People dropping off BART riders currently use a number of locations, most of them technically illegal. The northern entries at Addison Street are a primary drop-off location. Some riders use the white zone on the BART Plaza, but this area is not well signed for this purpose.

Drivers waiting to pick up BART riders have very few options. The white zones do not allow standing to wait for passengers, and the metered spaces along the street are often occupied. In a highly qualitative assessment, it appears these users are either waiting elsewhere in the Downtown Area or are using alternative BART stations (such as North Berkeley or Ashby) that are better suited for waiting.

Very short term parking (15 minutes or less) may also benefit certain convenience retailers (such as coffee shops, dry cleaners, and video stores) in the Downtown Area. Drop-off zones could also be converted to short-term parking in off-peak hours.

Figure 2.36: Loading areas are in high demand throughout the day.

Figure 2.37: The taxi drop-off on Center Street is also highly used.

Figure 2.38: The east side of Shattuck Avenue in the Study Area is almost entirely devoted to bus loading areas.

General Considerations

Beyond the through-traffic and access to transit, auto access within the Study Area also serves the activities of the Downtown Area. The existing curb functions in the Downtown Area reflect the various needs for access by different modes. The existing taxi stand on Center Street serves BART and AC Transit riders, but also the broader users of Downtown. Because of the density of activities, the curb zones are highly regulated and programmed. North of Center Street and south of Allston Way, metered parking is the standard curb function, as it is on most of the side streets. Adjacent to the BART Plaza and on the east side of Shattuck Avenue between Allston Way and Addison Street, the curb function is primarily devoted to bus loading. There is a small white zone adjacent to the BART Plaza for drop-off and service vehicles (such as USPS and City vehicles). Some City and BART maintenance vehicles pull directly onto the plaza to perform maintenance activities. On the east side of Shattuck Avenue, there is a small yellow zone for loading purposes between Allston Way and Center Street. On the west side of Shattuck Avenue there is a small yellow zone for loading and a red zone for BART police parking. On Center Street west of Shattuck Avenue there is a small green zone which was recently added to allow bank patrons to access ATMs without occupying the bus zone. Figure 2.39 illustrates the curb designations in the Study Area.

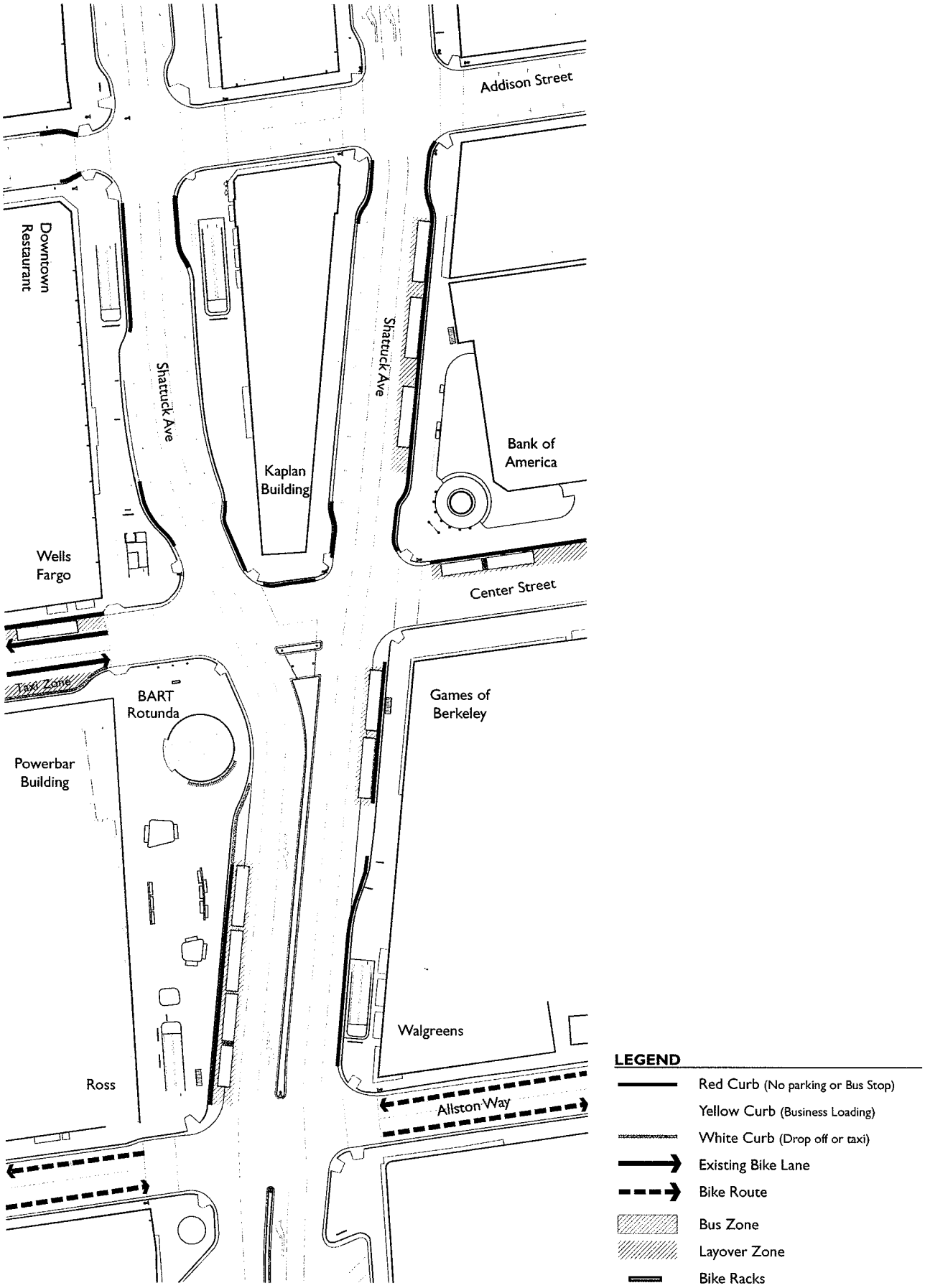


Figure 2.39: Curb designation and street configuration.

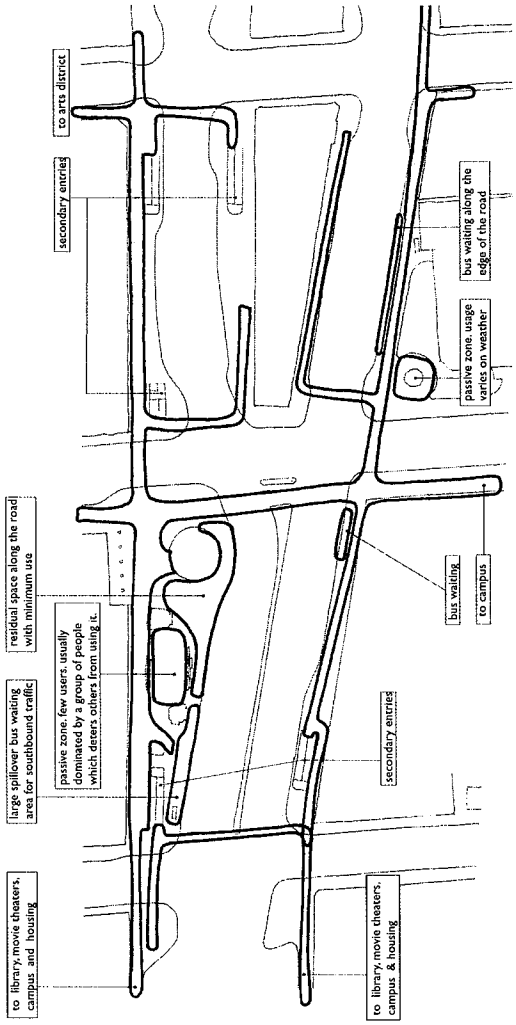


Figure 2.40: Site usage around BART Entry/Exits.

Figure 2.41: The BART plaza is used by individuals and groups at all hours of the day.

2.5 Site Use Considerations

The BART Plaza and Transit Area is consistently most active during the middle of the day. Office workers and students take their lunch breaks and run errands, families walk to the next activity, and others wait for the bus. Site observations yielded several categories of users, each of which have design implications. While the morning and evening peaks have the greatest transit rider activity, the mid-day has the most varied activities and the greatest uses of the plaza space itself.

Transit Riders

Transit riders are the predominant user group at most times of the day. People entering or exiting BART, waiting for the bus, or transferring between the two modes provide much of the activity in the Study Area. These users usually know their destination and take the shortest route to get there. More frequent users access BART from the southern or northern entries if they are closer to their destinations, while bus riders will take as direct a path as possible to and from their bus. This is reflected by paths of travel from the AC Transit stop on the BART Plaza:

- Riders crossing Shattuck Avenue to access the UC campus will walk directly along the curb, on the "back" (east) side of the BART rotunda to get to the intersection;
- Riders transferring to BART enter down the adjacent stairs into the BART station;
- Riders going to Berkeley High will walk directly west on Allston Way; and
- Riders with destinations elsewhere in Downtown take direct paths around the planters and other BART-related structures in the plaza.

People waiting for the buses at the various bus stops in the Study Area fan out over a wide area to wait for their bus to arrive. The waiting area on the BART Plaza extends from the Shattuck Avenue/Allston Way intersection to nearly 150 feet north to the set of benches in the middle of the plaza. The waiting area is usually contained within the curb zone, though, and bus riders for the most part do not wait on the building side of the planters and benches.

Bus waiting zones in other parts of the Study Area have similar use characteristics. The zone on the east side of Shattuck Avenue between Center Street and Addison Street extends along the entire length of the block, with many riders using the seating along the edge of the low wall outside of the Bank of America. The existing bus shelter is not especially well used in this area, likely because riders can wait farther back from the roadway by sitting and leaning against the low wall.

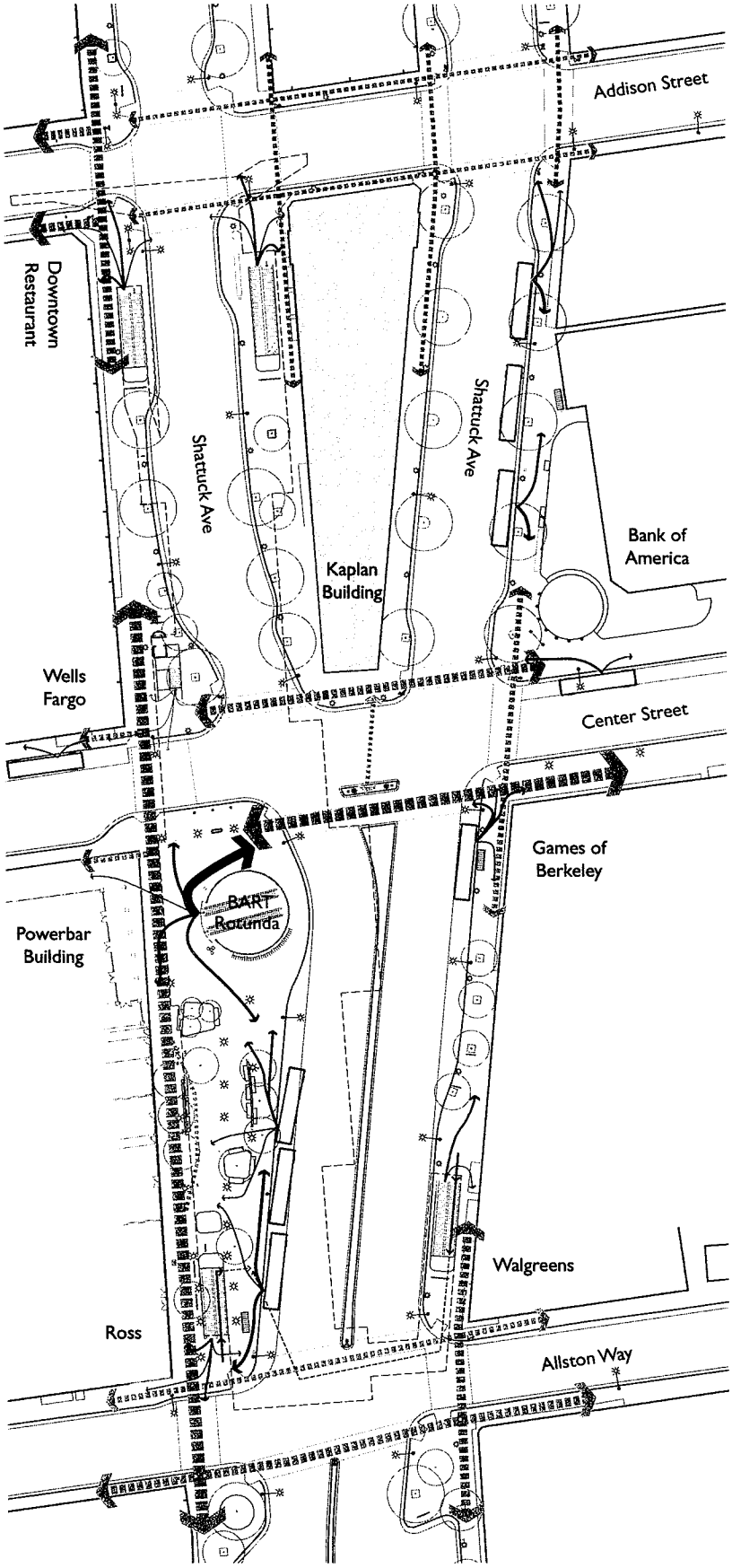


Figure 2.42: Travel paths and desire lines from an analysis of user groups in Fall 2005 and City of Berkeley pedestrian counts from May 2003. Line widths represent relative volume of pedestrian activity.

Figure 2.43: The bus waiting zone on the east side of Shattuck Avenue between Center Street and Addison Street; many riders use the low wall along the Bank of America for seating.

Figure 2.44: The raised planters on the plaza provide many types of seating that accommodate different combinations of groups and individuals.

Figure 2.45: The current plaza layout tends to push pedestrians to the perimeter, rather than drawing them through the center of the plaza.

Figure 2.46: People use the low walls and benches in the BART Plaza in many ways, sometimes to sit on, resting their feet on the benches below.

Plaza Users

A number of people use the existing seating within the plaza for a variety of uses. Groups of teenagers hang out, office workers eat lunch, read a book, or sit in groups, and some people just sit and watch others walk by.

People use the seating in a variety of ways. People often use the low walls of the planters in the BART Plaza to sit on, sometimes resting their feet on the benches below. Groups of people will often use the low walls and benches in different ways, with some people leaning on the walls, others sitting on benches, and some sitting on the plaza surface or standing.

There are two primary areas in the Study Area where people congregate and stay for long periods of time without using transit: (1) the center of the BART Plaza, and (2) the Bank of America plaza. Different groups tend to cluster in each. The BART Plaza often has groups of people and individuals seeking sunlight and the public setting the space offers. The plaza is a central place to watch or meet people, and the larger groups are often in flux, with people arriving or leaving constantly. The Bank of America plaza, on the other hand, is shaded by the surrounding trees and is often populated by individuals or small groups of people looking for a more private setting.

The plaza area is an important gathering place for homeless people in Berkeley. The homeless population uses the plaza in much the same way as other groups. Some homeless users sell the "Street Spirit" newspaper. These vendors often choose locations with large numbers of passersby in a tight area, such as near the raised planter at the north end of the BART Plaza or between the entrance to the Walgreens at Allston Way and Shattuck Avenue. Many homeless people also use the Bank of America plaza because it is out of the way and sheltered from passersby.

At times, the homeless population uses the plaza in large numbers, and can be perceived as "dominating" the space. The new plaza design is aimed at incorporating new uses that invite others to use the plaza area without excluding any users. Understanding the needs of the homeless population is important for designing a plaza that can be used by all.

Buskers and people soliciting donations for various causes are another important user group. These users tend to concentrate in the area in front of the BART rotunda, often along the building edge, where the pedestrian traffic flows are the greatest. The expansive area in front of the BART rotunda sees people waiting to meet, too, since it is a central location that is highly visible. Buskers rarely use the center of the BART Plaza, since the current design tends to push pedestrians to the perimeter, rather than drawing them through the center of the plaza.

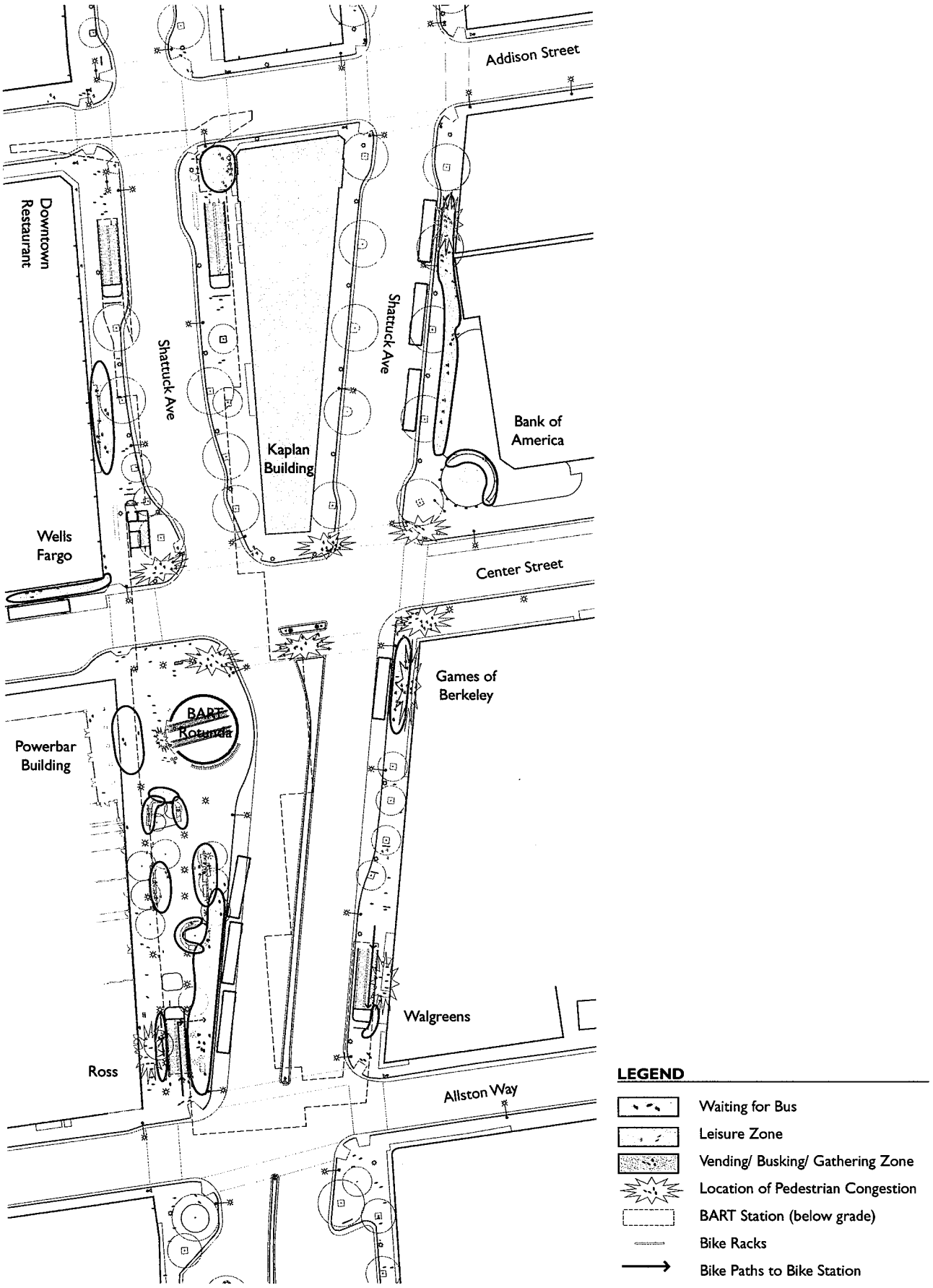


Figure 2.47: Plaza use patterns based on information gathered through observation and analysis of the user groups at key times of the day.

Adjacent Land Uses

The land uses fronting the Study Area predominantly consist of ground floor retail uses, often with office or residential uses on upper floors of buildings. Both sides of Shattuck Avenue between Allston Way and Center Street have active ground floor uses, including several cafes and retail storefronts on the west side, and retail storefronts on the east side with one restaurant space. This block has some larger-footprint uses, with Ross on the west side and the Walgreen Drug Store on the east side. The intersection of Shattuck Avenue and Center Street has banks on three corners. This limits the retail potential of the corner sites that have the most adjacent pedestrian traffic. This also creates blank or inactive facades at these important corners. The southwest and northwest corners of the intersection have large office buildings (13 stories).

The block of Shattuck Avenue between Center Street and Addison Street also has ground-floor retail uses, with a high number of restaurants and cafes. The Shattuck Square block, between the two legs of Shattuck Avenue has businesses fronting on both sides and has predominantly single-story buildings, except for the Kaplan Building on the southern corner. Only a few of the ground floor uses in the Study Area currently use the public space of the adjacent sidewalk for seating or other activities. One café on the west side of Shattuck Avenue between Center Street and Addison Street has several tables outside, and the restaurant at Shattuck Square and Addison Street has limited outdoor seating space.

East Elevation of Shattuck between Center and Allston
Figure 2.48: Adjacent land uses support increased activity and new uses on the plaza.

Retail Demand Segments and Synergy in the Downtown

There are four primary demand segments in the Downtown:

- **Students.** Berkeley High School students contribute to retail sales in the middle of the day (lunchtime and after school) while UC Berkeley students make purchases throughout the day as well as at night, supporting restaurants, bars, cafes and cinemas in the Downtown.
- **Daytime office workers.** There are over 7,000 office workers in the immediate Downtown Area. A national study completed by the International Council of Shopping Centers (ICSC) suggests that the average downtown office worker spends $130 weekly on goods and services close to his or her place of work, representing potential for more than $19 million in annual sales in Downtown Berkeley.[2]
- **Destination.** Residents from Berkeley and beyond come Downtown to access a variety of cultural or entertainment uses in the Downtown.
- **Residential Population.** Since 2000, 522 new units have been built in the Downtown and more than 1,800 units are under construction or in the development pipeline. Until recently, virtually all of these units have been for rent, and many of the occupants are students, however this market segment may be differentiated from the student group as these residents will support retail according to local buying patterns. More recent developments are also starting to include ownership housing, which will have further implications for the retail market in the Downtown.

While the Downtown currently caters to each of these populations, it does not fully capitalize on the synergistic potential among land uses or among retailers. For example, while the Downtown Arts District appears to be quite successful, the success has largely been contained to Addison Street west of Shattuck Avenue. The opportunity exists to draw these patrons into other areas of the Downtown and to expand the range of uses that cater to this segment. Similarly, the expanding residential population Downtown represents an opportunity to ensure that the product mix in the Downtown addresses the local shopping habits of downtown residents. Development of ownership units may represent an opportunity to expand local-serving retail even further to serve a greater variety of household types.

Figure 2.49: Shoppers and other leisure users stay mostly along the edge of the plaza. The design of the plaza does not invite use by this group; most people walk by without using the plaza space.

[2] Office Worker Retail Spending Patterns. International Council of Shopping Centers, 2004.

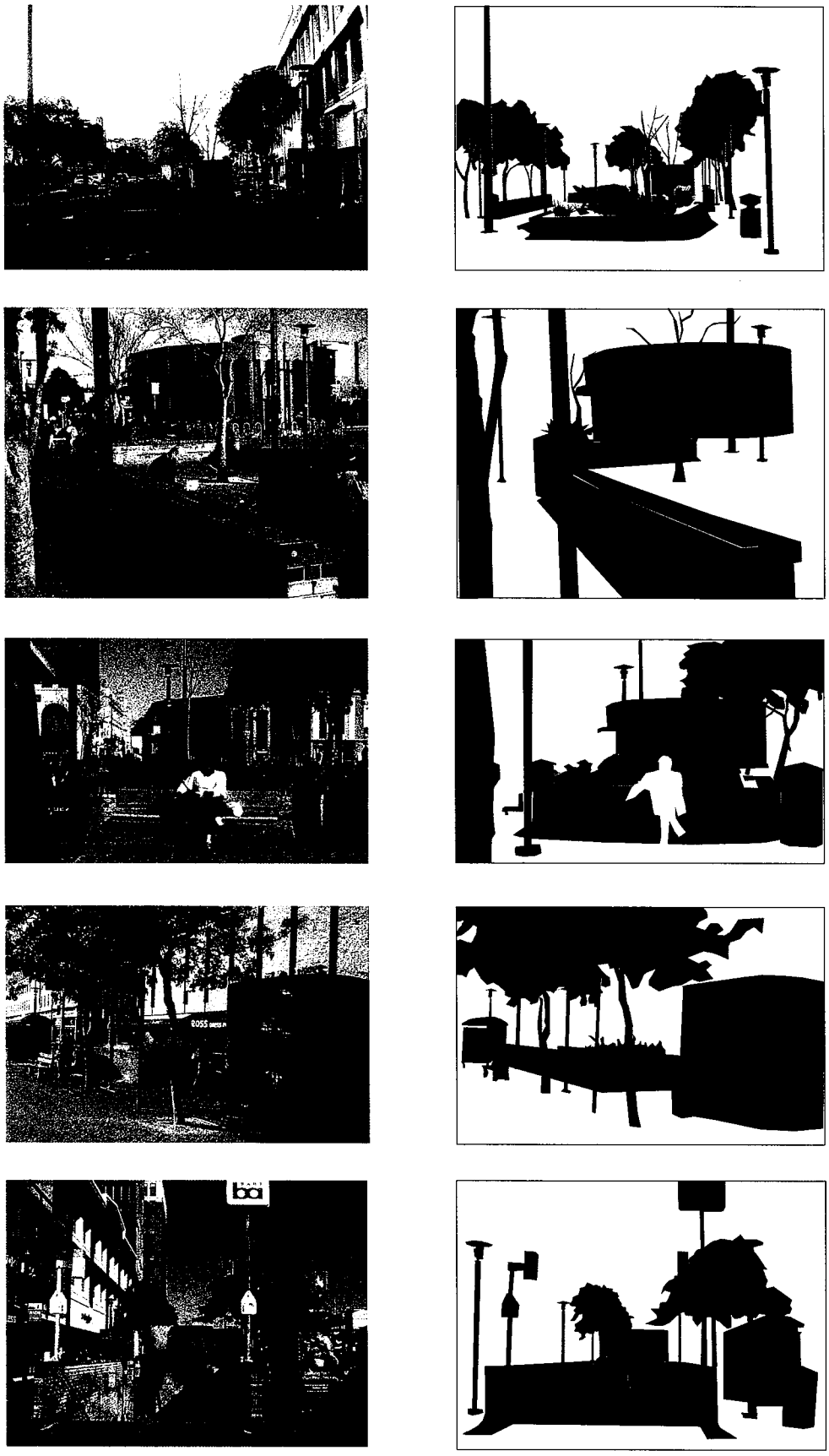


Figure 2.50: These studies show visual obstructions at various locations within the study area to demonstrate the impediments to visibility.

Shoppers/Leisure Users

Shoppers or other leisure users tend to stay along the edge of the plaza. The BART Plaza design retains the character of a sidewalk along the western building edge, with a relatively impermeable edge formed by the BART entries, raised planters, seating, street trees, and lights. Because the design of the plaza does not invite use by this group, most people walk by without using the plaza space. There are few other gathering or resting places for shoppers within the Study Area. Seating is primarily located at bus stops or in the BART Plaza.

Visitors/Tourists

Visitors and tourists are an important user group. Many arrive by transit with destinations on the UC Berkeley campus. The existing design of the Study Area is disorienting for this user group, as the BART entries point away from the primary axis to the campus along Center Street. Many visitors appear disoriented upon exiting from BART and will take a circuitous path to their destination and sometimes need to ask passersby for directions. Similarly, people who are unfamiliar with the area will often bypass secondary BART entries to access the station via the rotunda due to its visual prominence in the Downtown.

Safety Concerns

While the BART Plaza, and the Study Area as a whole, is not a hotbed of criminal activity, it can, at times, feel unsafe. Existing lighting is often obscured due to the close placement of trees. The raised planters, low walls around BART entries, and other opaque structures block sight lines through the plaza (See figures 2.50 and 2.51). Blank facades along the west side of Shattuck Avenue and the separation of the sidewalk area from passing street traffic limit passive surveillance of the plazas. Finally, the BART rotunda reduces the visibility of the plaza from the north and east of the Study area, because of the opacity of the glass as well as the steel structure itself.

Existing BART entries, including the elevator, do not provide good sight lines into the station, and, with the gates down one flight of stairs, are often used as toilets during the night. The BART Plaza area can be contrasted with Center Street between Shattuck Avenue and Oxford, where well-placed pedestrian lighting (spaced so as not to conflict with street trees), activated building frontages, and clear sight lines makes the space feel safer to users. The east side of Shattuck Avenue between Center Street and Allston Way has similar problems with a lack of clear sight lines and lighting that is obscured by trees.

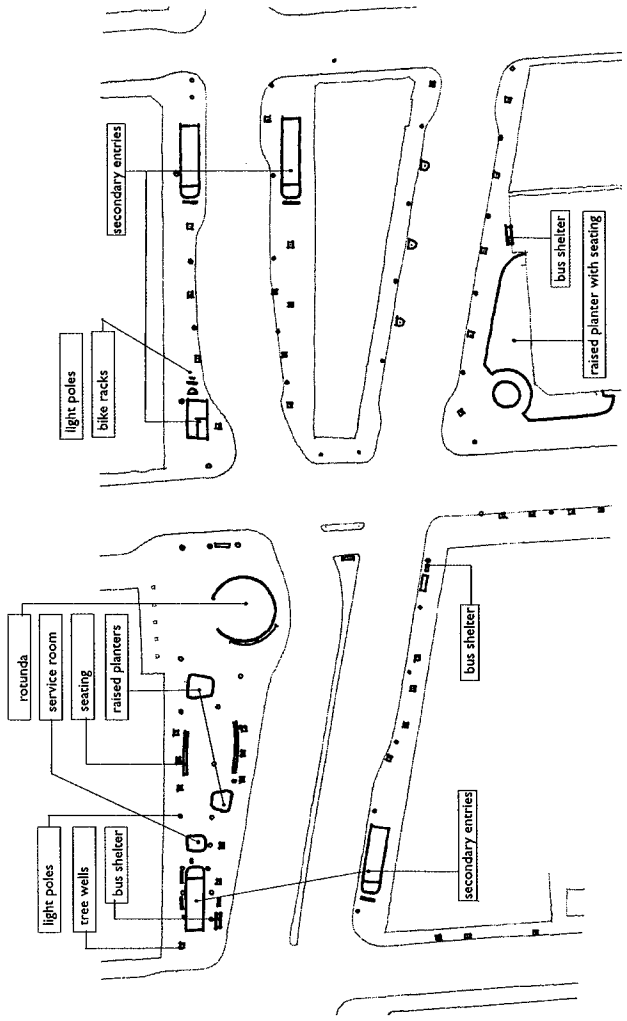


Figure 2.51: Physical obstructions at various locations within the study area, to demonstrate the impediments to visibility.

Figure 2.52: The rotunda has the potential for cosmetic improvements such as clear glazing and lighter colored finishes.

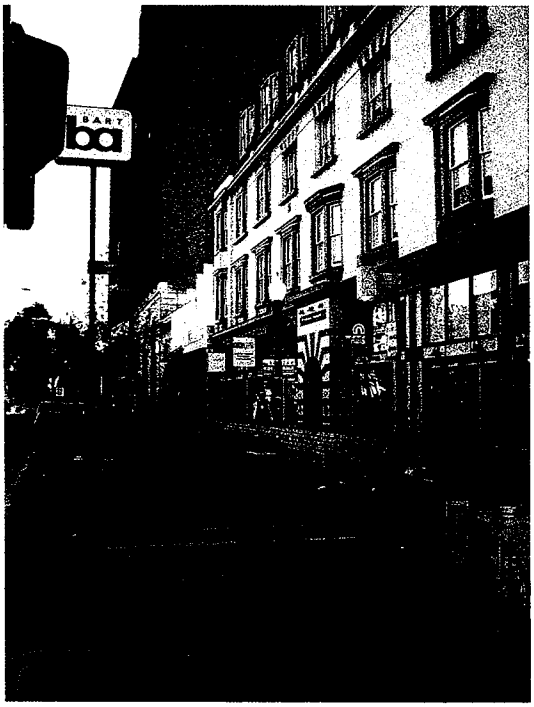


Figure 2.53: The secondary BART entries lack visibility and prominence and present an opportunity to develop a coherent design vision for the entire study area.

2.6 Site Opportunities and Constraints

The following opportunities and constraints were identified as a result of input from the community and Downtown stakeholders, as well as City, AC Transit, and BART staff, and the analysis performed by the consultant team.

Potential New User Groups

The current design of the plaza supports some users at the expense of others. While it is difficult for a survey of existing conditions to identify these users, discussions with the CAC and the broader public at the first community workshop included a focus on generating concepts for those who are not currently using the plazas, including supporting cultural uses, expanded sidewalk cafes, and others.

BART Entries

The BART entries present both an opportunity and a constraint for the redesign of the plaza. The entries, aside from the rotunda, lack visibility and prominence, and do not have escalators. As a result, the rotunda entry is more heavily used. The secondary entries present an opportunity to develop a coherent design vision for the entire Study Area. The potential to add canopies, shorten openings, and/or modify the low walls surrounding the entries could help improve the visual character of the plaza and increase the visibility of the entries.

The rotunda itself presents an opportunity, but also a constraint, as any modifications to the structure or the opening may be prohibitively expensive in the near term. Cosmetic changes to the rotunda, such as clear glazing, lighter colored finishes, or other less expensive fixes may be more feasible financially. A range of potential changes have been explored in developing alternative concepts for the plaza.

Consolidating Bus Facilities

The possibility to consolidate bus facilities through the use of exclusive bus lanes and bus loading platforms provides an opportunity to reorganizing bus facilities within the Study Area. In addition to improving bus performance and service reliability, this opportunity would alleviate existing pedestrian pinch points at bus stops, particularly on the east side of Shattuck Avenue.

Capacity of Shattuck Avenue in the Study Area

The lack of automobile congestion and delays in the Study Area provides the opportunity to reconfigure the cross section of Shattuck Avenue, while still maintaining an acceptable Level of Service for motor vehicles. A reduction in automobile capacity could be used for expanded bus facilities (in an exclusive lane) as

well as expanded pedestrian areas (in the form of sidewalks, bus loading platforms, and center medians).

Outdated Surface Materials and Lighting

The brick paving and existing pedestrian street lights on the BART Plaza are outdated and showing wear and tear. In addition, existing planter areas located at the BART entries and in the middle of the plaza act as barriers without providing amenities other than as seating areas. The curved base of the BART entry structures also results in newspaper racks, bus stops, and other streetscape elements having to be installed about three feet away from the walls around the entries. This results in an inefficient use of potential plaza space and an area that is a challenge to clean and maintain.

Figure 2.54: The brick paving in the BART Plaza is monotonous and clearly shows patches in locations where alterations have been made in the Plaza.

Existing Utilities and Underground Facilities

Because improvements in the Study Area have been designed in small increments over many years since the major BART construction and the drastic reconfiguration of the roadway, the location of existing utilities is complex. This complexity is furthered by the underground extent of the BART station. Throughout most of the Study Area, utilities are located underneath the sidewalks, near the curbs. Additional utilities are located within the roadway. The concrete structure of the BART station limits, to some extent, what improvements are possible, and has implications for the cost and feasibility of more major changes to access and circulation.

The existing plaza area drains to the historic curb line (approximately ten feet east of the existing buildings that front onto the west side of the plaza). At the time BART was constructed, some major telephone infrastructure was located under the plaza area. The utility configuration is not anticipated to have an impact on the concept design, but a more detailed understanding of this issue must be developed as the design is refined.

Figure 2.55: The low walls in the plaza create barriers to pedestrian movement and can be modified to make better use of the plaza space.

Recent Downtown Improvements

The incremental improvements undertaken by the City and private development in the past 10+ years include:

- The Center Street improvements that widened the existing sidewalk, installed decorative tree grates, pedestrian-supportive crossing of Shattuck Avenue, public art (the "tuning fork" public art installation in the median of Shattuck Avenue), and pedestrian-scale lighting (including some lighting on the BART Plaza);
- The Downtown Streetscape improvements that replaced street trees and added pedestrian-scale lighting on Shattuck Avenue between University Avenue and Kittredge Street (excepting the BART Plaza);

Figure 2.56: Center Street improvements provide a widened sidewalk with a cafe zone, pedestrian lighting, trees, and pedestrian crossing improvements.

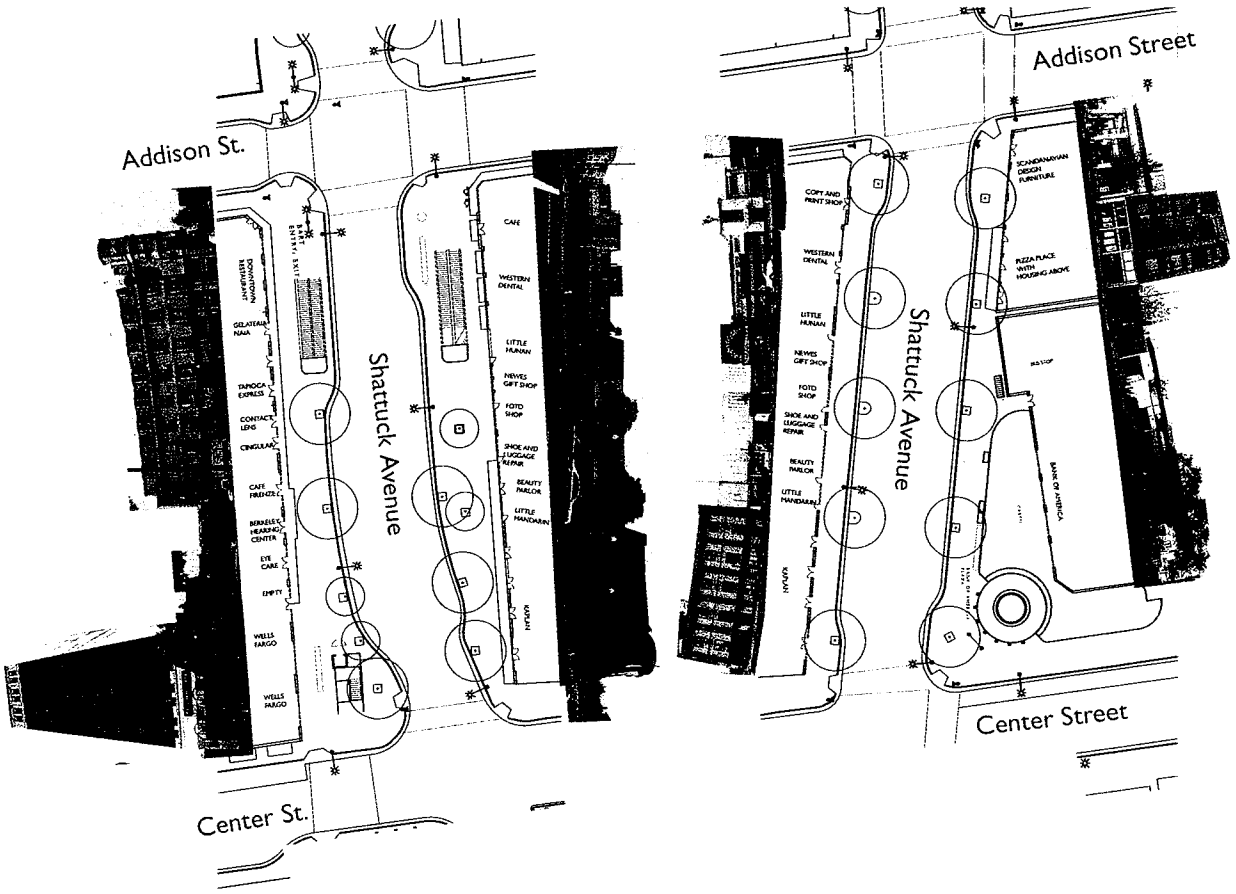
- The Arts District improvements that added public art, decorative paving patterns, ornamental tree grates on Addison Street between Shattuck Avenue and Milvia Street, and public art adjacent to the BART entry at Addison Street and Shattuck Avenue; and
- Recent residential, mixed-use, and entertainment developments that have increased the 24-hour activity of the plaza, augment demand for local-serving retail, and create the opportunity to activate the plaza in ways that were not possible in the past.

This incremental approach to improvements has resulted in successful upgrades, but has eroded the coherence of the Downtown as a district within the city. The concept design for the BART Plaza and Transit Area builds off of these incremental improvements, but also develops a comprehensive identity for the Study Area that could be extended into the broader Downtown.

Downtown as a Retail Destination

The ground floor retailers that flank Shattuck Avenue suffer due to poor visual and physical connectivity between the two sides of the street. Strong retail environments benefit from visual connections between stores and a cohesive identity that contributes to the "sense of place" that has become the hallmark of destination retail. The landscape for destination retail has become increasingly competitive in recent years. Lifestyle centers, factory outlets, power centers, and main street retail are models of regional retailing that attempt to create an identity within the region as a destination. The Study Area represents an opportunity in that many of the qualities that shoppers look for in destination retail—a variety of shops, a pleasant walking environment, entertainment and dining combined with shopping opportunities and a memorable sense of place—already exist in the Downtown. However, the area is constrained by the width of the Shattuck Avenue right-of-way and the poor visual and physical connection between both sides of Shattuck Avenue.

The plaza reconfiguration presents an opportunity to strengthen the cohesiveness of the plaza retail environment. Design changes present the potential to merge retail programming with public improvements in the form of outdoor dining, moveable street furniture, formal and informal vending kiosks, and/or other solutions. By visually extending retailing into the public realm, the plaza may help to capture the full potential of the activity its other uses generate, instead of acting as a barrier to retail synergy.



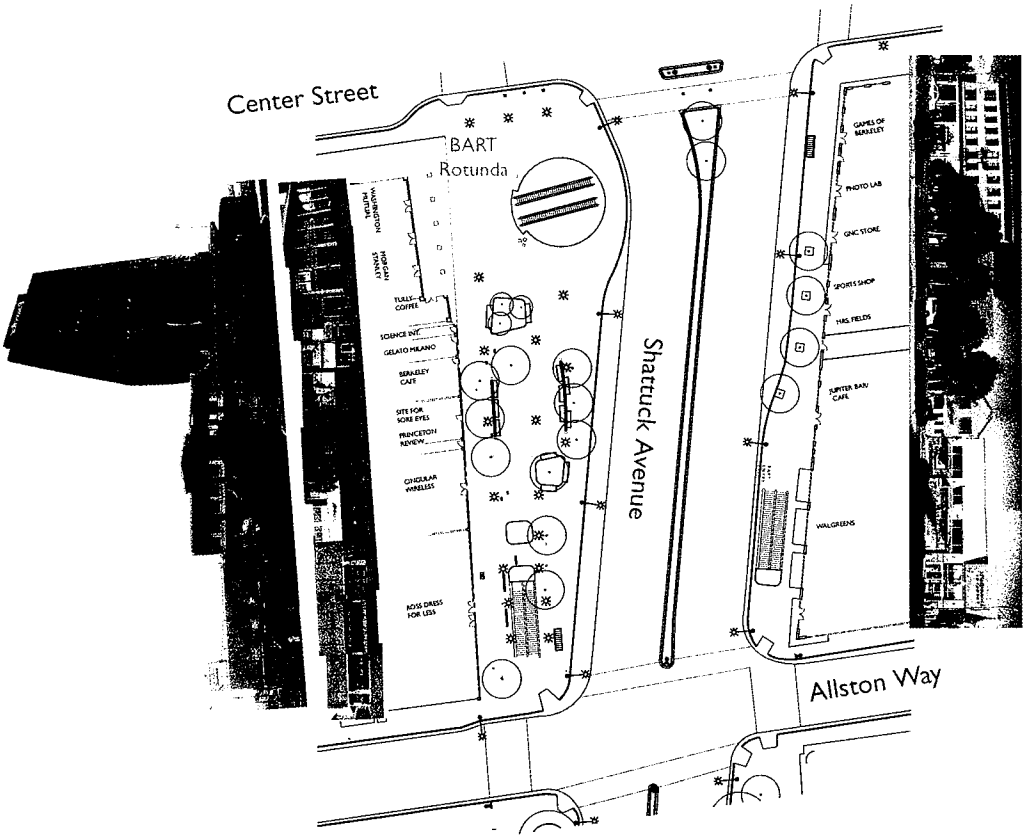


Figure 2.57: The plaza design presents an opportunity to improve Downtown as a retail destination.

3 Design Alternatives

3.1 Introduction

There are many possible design solutions that meet the project goals and objectives, while addressing the site opportunities and constraints. There are a number of complexities given the Downtown context and the existing planning framework. This process considered in some detail a number of potential alternative design scenarios. Working with the TWG and CAC, these alternatives were refined and presented to the general public in April 2006. The April workshop provided critical input on the path of the project and has led to the concept plan described in the next section of this report.

3.2 Sketch Alternatives

The first step in the design process was to develop sketch alternatives that focused primarily on large-scale issues that impact the long-term vision for the Study Area including: Shattuck Avenue circulation options, the primary BART entry, multi-modal access, and open space opportunities. The following text and associated figures illustrate the basic considerations of each alternative. In all sketch alternatives, exclusive bus lanes and the functional requirements of BRT have been accommodated. While the decision to implement BRT is still unresolved, the improvements shown in the sketch alternatives do yield benefits in terms of pedestrian circulation due to the concentration of bus stops that is enabled by exclusive bus lanes. (Table 3.1, following the description of the alternatives provides a comparison of the four alternatives.)

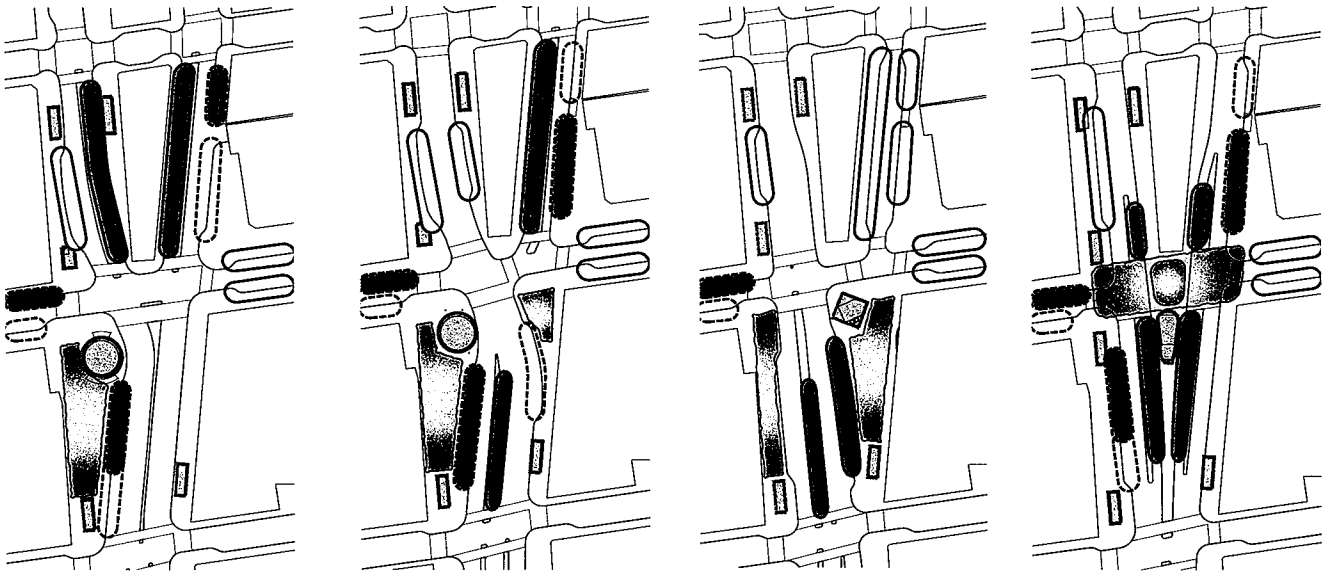


Figure 3.1: The sketch alternatives highlight long-term programming options that address multi-modal access as well as open space opportunities.

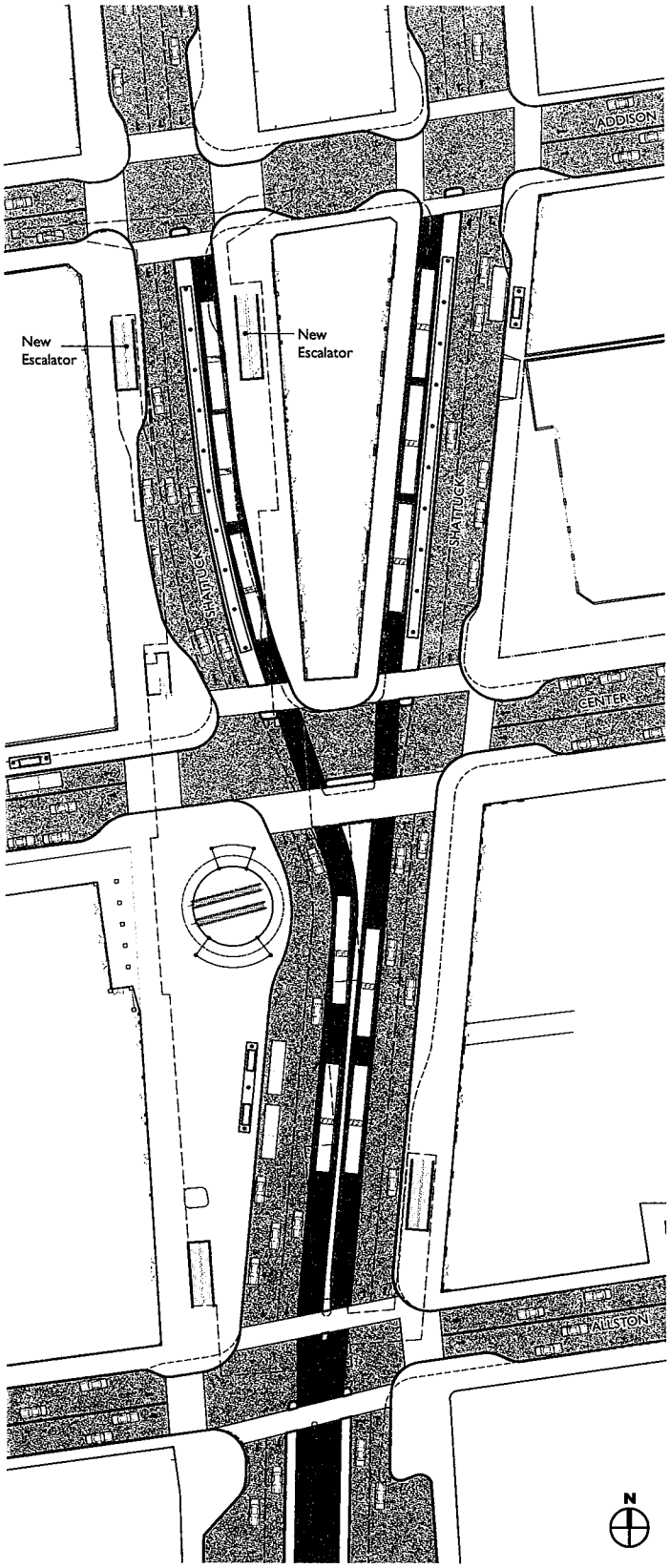


Figure 3.2: Option 1 Plan

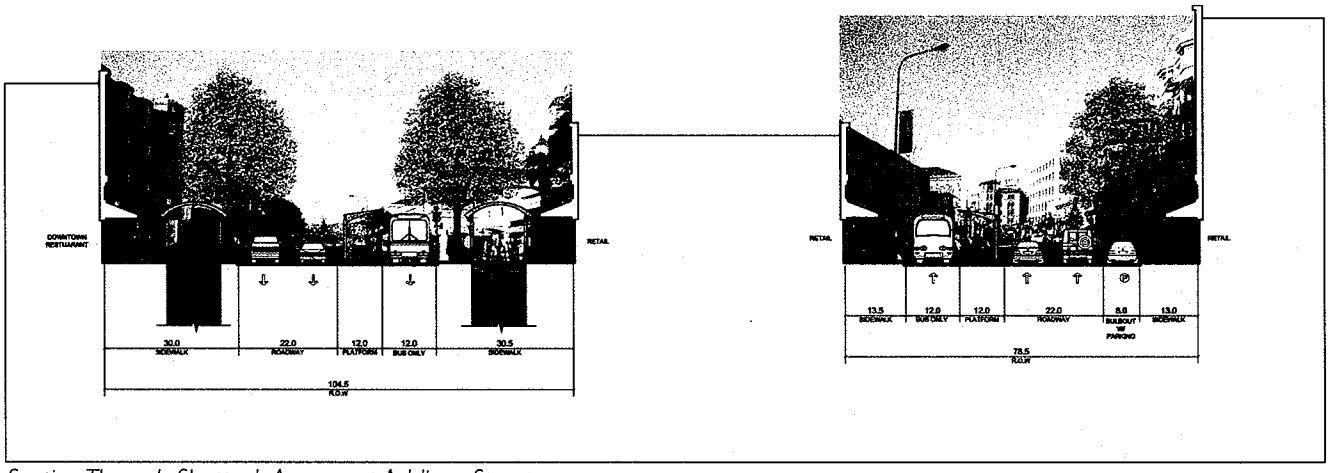
Option 1

This alternative retains the existing basic street layout and adds exclusive bus lanes in a configuration similar to that under study by AC Transit, with bus platforms between Center Street and Addison Street. The main BART Plaza space has the same area, but the design concept would modify the BART rotunda (See Figure 3.3 for enhancements to the Rotunda structure) to improve its relationship with the plaza. The exclusive bus lanes and bus platforms allow for some pedestrian improvements, including the widening of the sidewalk on the east side of Shattuck Avenue at Center Street. This alternative prohibits left turns from Shattuck Avenue to Center Street and Allston Way.

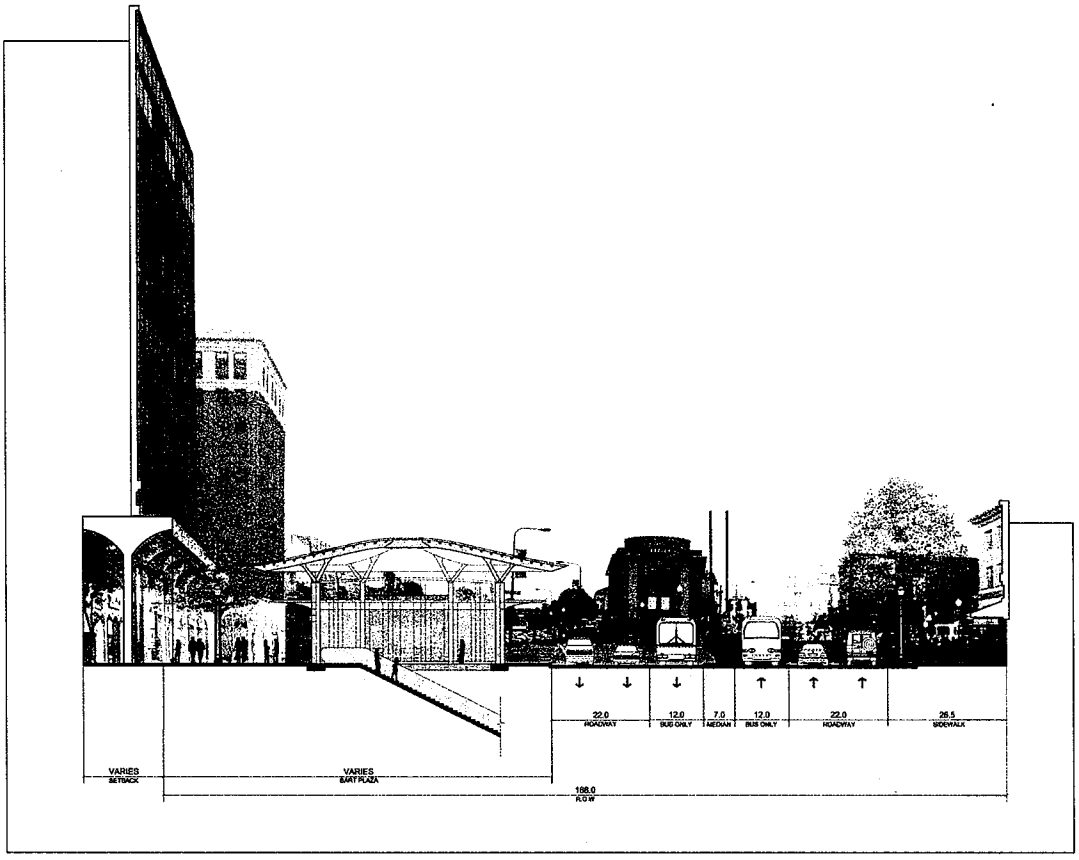
Improvements to the secondary BART entries would include canopy structures and new reversible escalators at the two northern entries to provide capacity for bus-BART transfers and to improve the accessibility of the Arts District.

Exclusive bus lanes would remove metered parking from both sides of Shattuck Square, but the plan would also increase the amount of short-term parking available adjacent to the BART Plaza and on the east side of Shattuck Avenue north of Center Street by concentrating bus loading on the bus platforms.

Although this alternative is the least expensive and has minimal impact on the Downtown functions and circulation, it does less to improve pedestrian circulation, bus transfers or bus-BART integration than some of the other alternatives.



Section Through Shattuck Avenue at Addison Street



Section Through Shattuck Avenue and BART Plaza at Center Street

Figure 3.3: Option 1 Sections

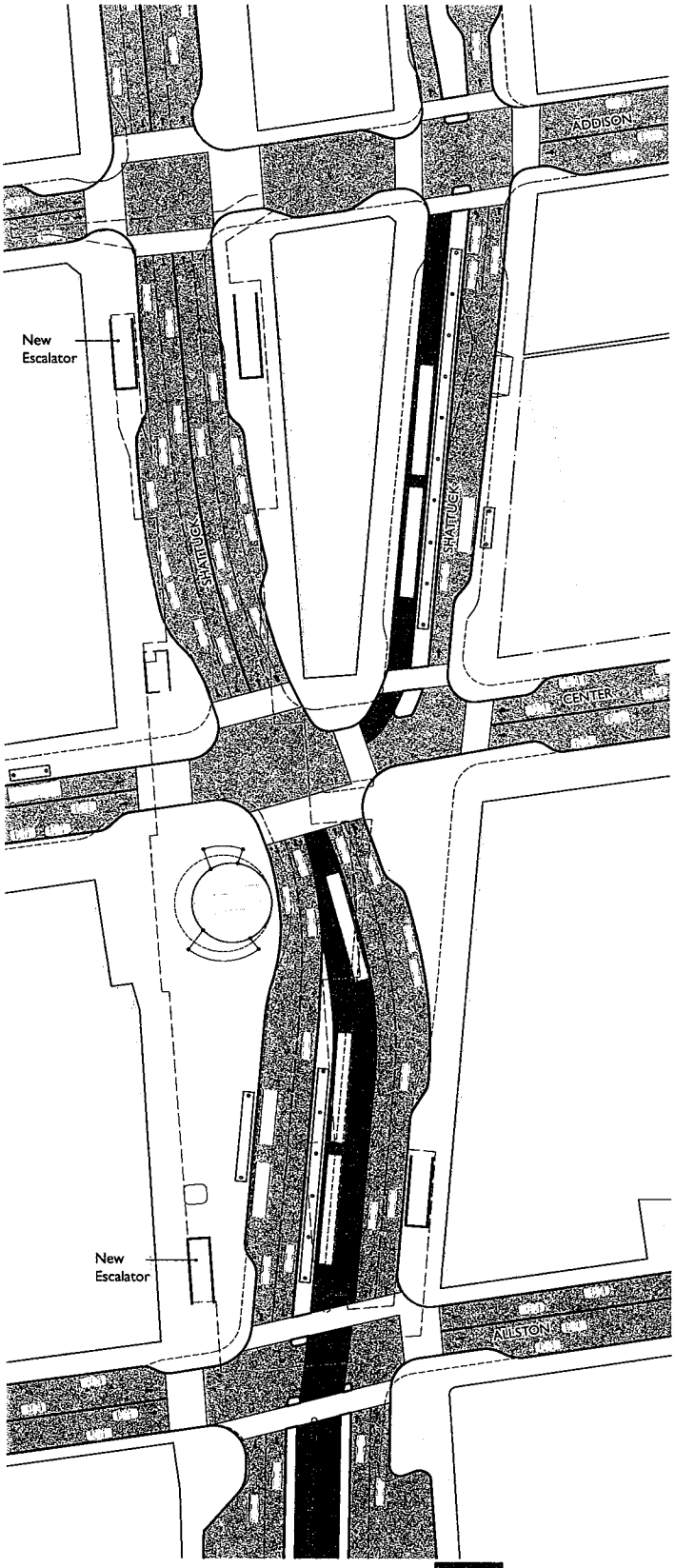


Figure 3.4: Option 2 Plan

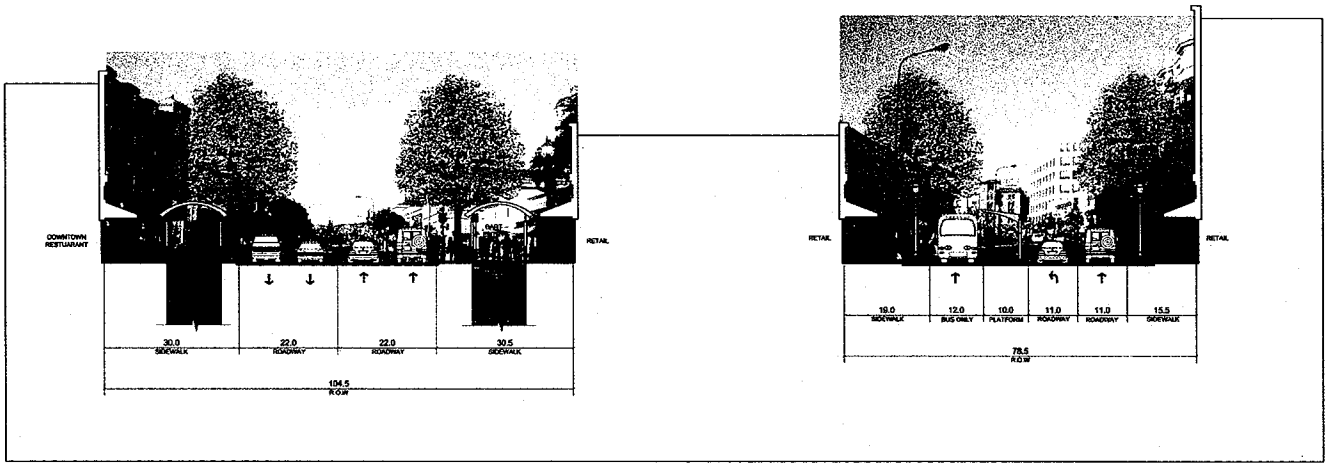
Option 2

This alternative removes the existing Shattuck Avenue couplet, with traffic reconfigured to two lanes in each direction north of Center Street. The east side of Shattuck Square accommodates a northbound exclusive bus lane, the northbound bus platform, and a local travel lane. In the southbound direction, an exclusive bus lane begins just south of Center Street, and the southbound bus platform would be located in the middle of Shattuck Avenue north of Allston Way. The reconfiguration of Shattuck Avenue creates a secondary open space on the east side of the street at Center Street.

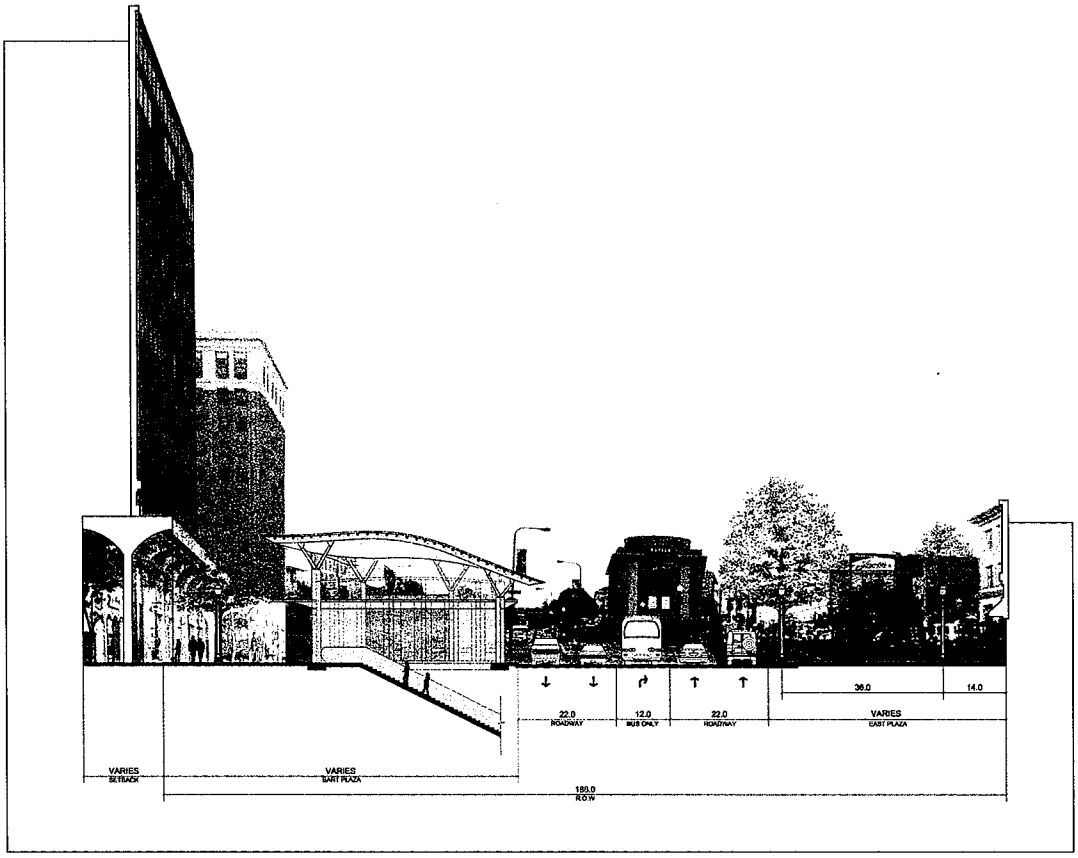
Improvements to the secondary entries would include canopy structures and new directional escalators at the two western entries to provide capacity for bus-BART transfers and to improve the accessibility of the Arts District.

This alternative generally improves the integration of buses and BART, particularly in the southbound direction, and expands the open space area. The primary BART Plaza retains a similar configuration as Option 1, with minor modifications to the curb line. The BART rotunda is retained and enhanced with a treatment similar to Option 1.

This alternative would require a separate BRT phase for the Shattuck Avenue/Center Street traffic signal. In addition, removing the couplet may preclude left turns from Shattuck Avenue to the side streets, making some traffic movements more circuitous. The two-way configuration also widens pedestrian crossing distances at Shattuck Avenue and Addison Street, and could encourage faster vehicular speeds, which would have a negative impact on pedestrian safety. In this alternative, care needs to be taken while designing the bus platforms so that passengers do not feel isolated in the middle of the roadway. This alternative has the added drawback that bus patrons must use the crossing at Allston Way to access the southbound bus platform. Metered parking is removed on the east side of Shattuck Square and reduced slightly on the west side, but a new on-street parking or drop-off area is included on the east side of Shattuck Avenue south of Center Street.



Section Through Shattuck Avenue at Addison Street



Section Through Shattuck Avenue and BART Plaza at Center Street

Figure 3.5: Option 2 Sections

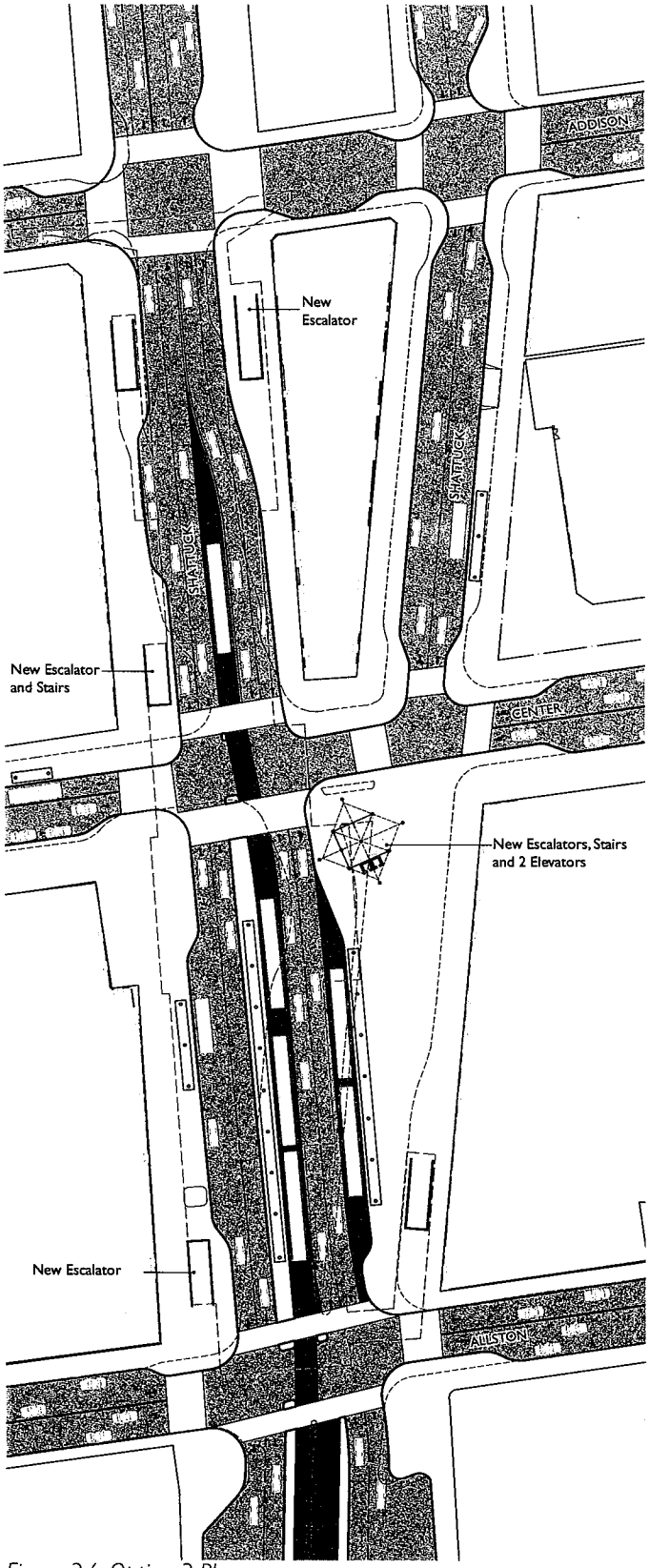


Figure 3.6: Option 3 Plan

Option 3

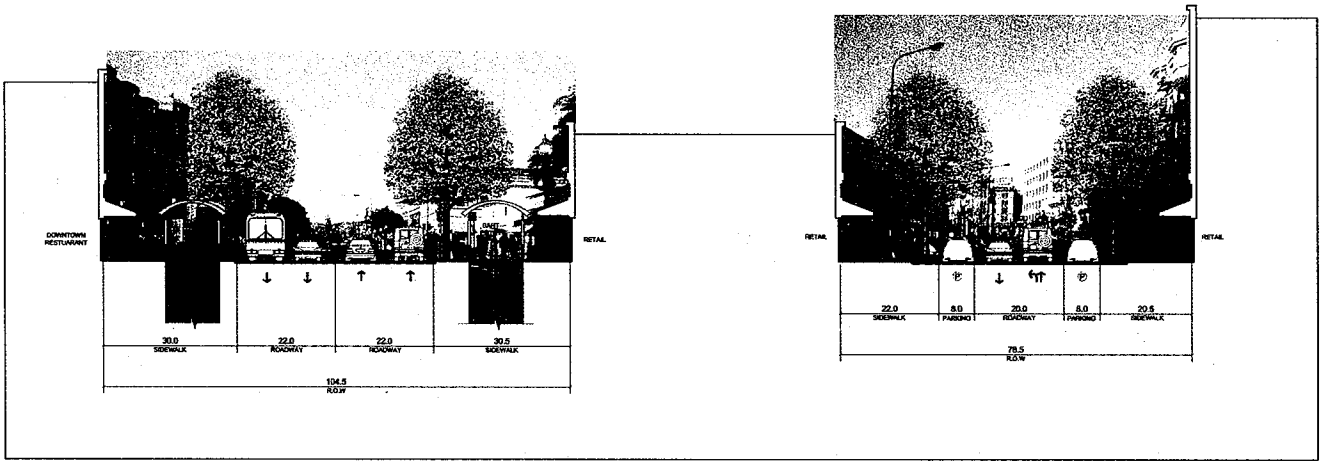
This alternative removes the existing BART rotunda and relocates the primary BART entry/exit and the primary open space to the east side of Shattuck Avenue. The existing couplet configuration is again removed north of Center Street, with traffic reconfigured into a 4-lane road to the west of Shattuck Square and a two lane local street on the east side of Shattuck Square. The northbound exclusive bus lane would stop south of Allston Way and buses would cross over to a platform located adjacent to the primary open space. This movement would require a dedicated signal phase for bus movements. In the southbound direction, an exclusive bus lane would start north of Center Street and the bus platform would stretch from Allston Way to Center Street.

This alternative creates a higher quality primary entry to BART with escalators, stairs, and two elevators, and provides a more direct connection from BART to the UC campus. It generally improves integration of buses and BART, but makes BART access from the west side of Shattuck Avenue more circuitous. The new plaza on the east side of the street would have a similar function and shape as the existing plaza, but would be located on the sunnier side of the block (as shown in the solar analysis in Figure 2.18), which may encourage more users to linger in the space. The integration of the BART entry and bus platform would also serve to reinforce the transit connectivity.

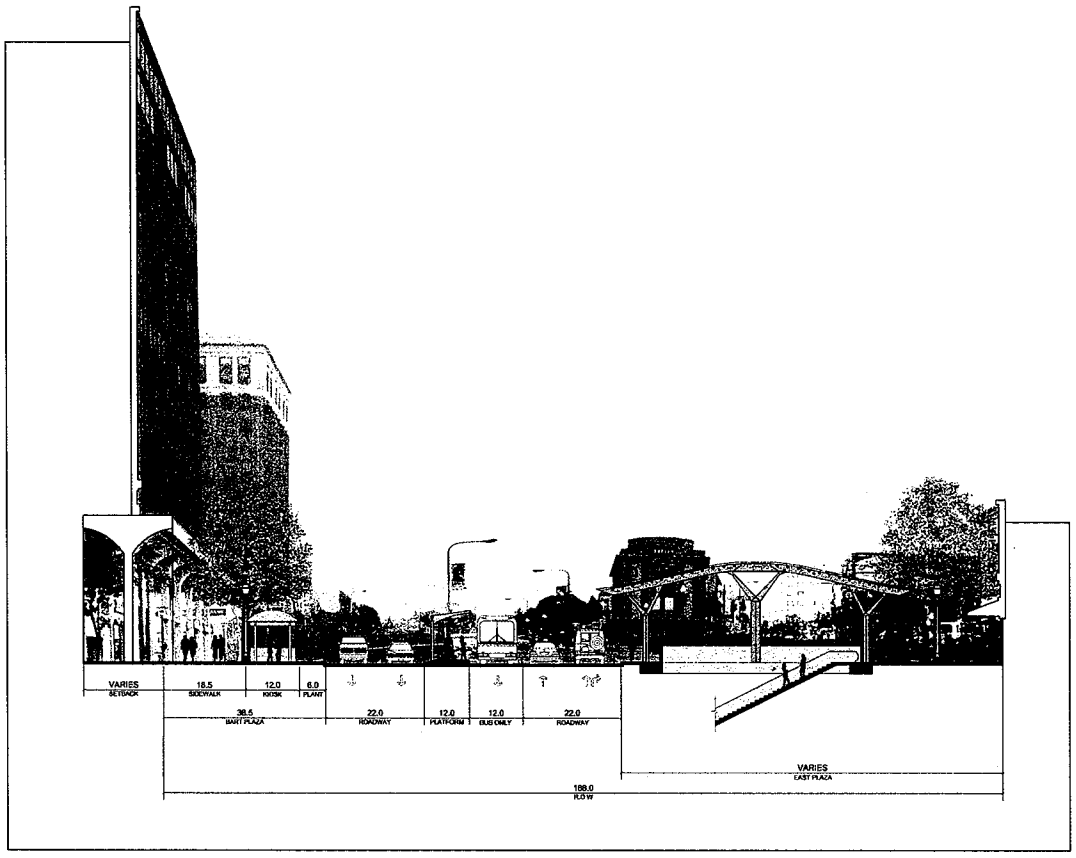
As in Option 2, removing the couplet may make some traffic movements more circuitous and could have the unintended effect of increasing traffic speeds through the area. Again, in this alternative, care needs to be taken while designing the southbound bus platform so passengers do not feel isolated in middle of roadway.

This alternative has the significant potential cost implications of moving the primary BART entry. While the concept design uses the existing BART station structure to provide access, there still may be the need for some new excavation to implement this concept. This alternative includes improvements to the secondary entries, including canopies and several new directional escalators. Additionally, the existing elevator on the west side of Shattuck Avenue is replaced with a new escalator and stair configuration similar to the other secondary entries.

This alternative removes metered parking from the west side of Shattuck Square and reduces the availability of parking on the west side of Shattuck Avenue, north of Center Street.



Section Through Shattuck Avenue at Addison Street



Section Through Shattuck Avenue and BART Plaza at Center Street

Figure 3.7: Option 3 Sections

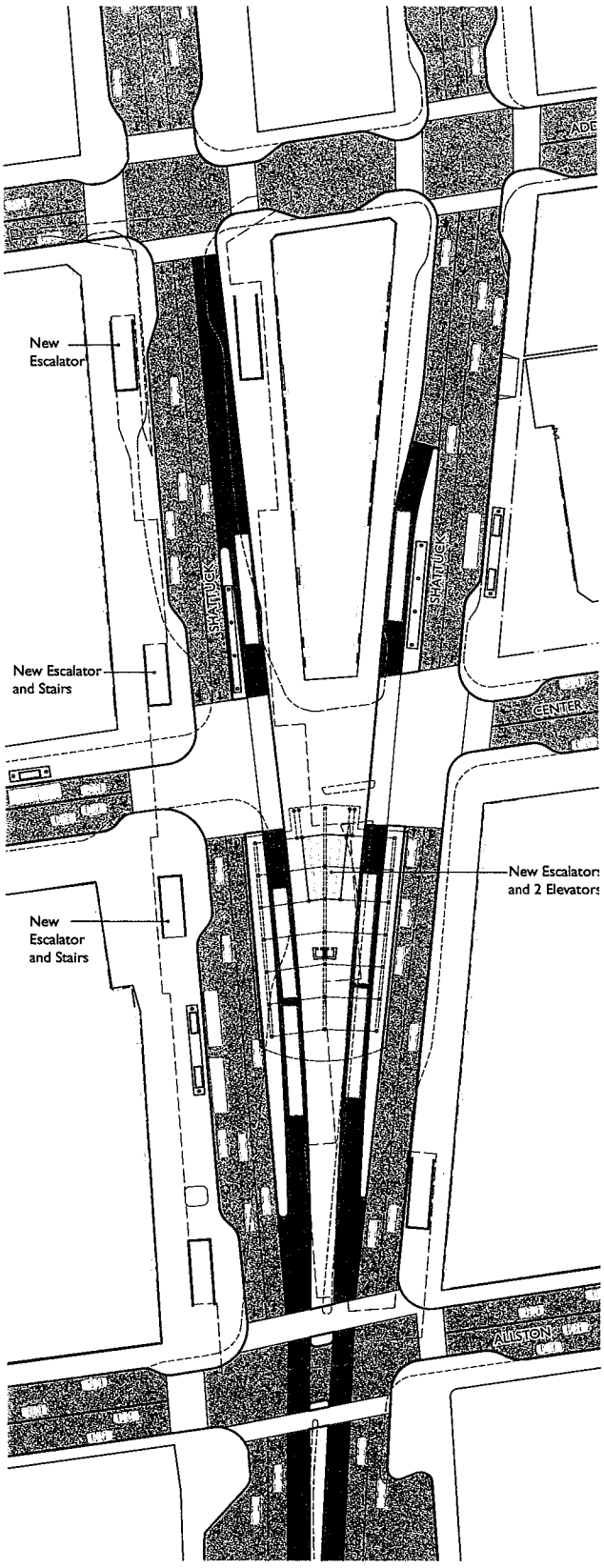


Figure 3.8: Option 4 Plan

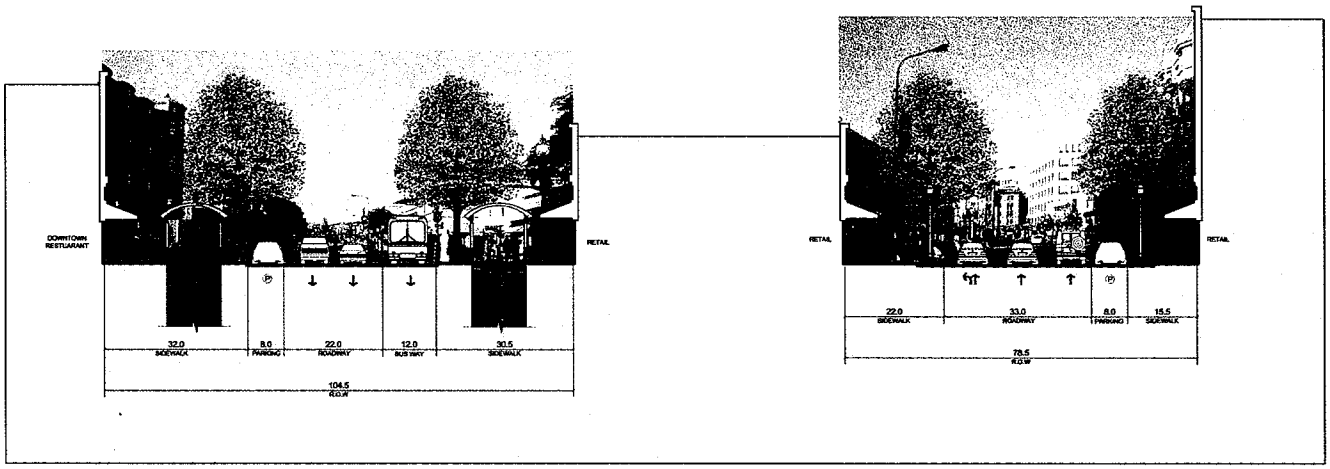
Option 4

This alternative re-envisions Downtown Berkeley to create the primary transit plaza in the center of Shattuck Avenue at Center Street. It removes the BART rotunda and relocates the primary BART entry/exit to the center median creating a combined transit station for both buses and BART, while closing off Center Street to through traffic crossing Shattuck Avenue. A highly visible canopy structure could enclose both functions, while still allowing light and air to penetrate. Exclusive bus lanes would run in the center of Shattuck Avenue, with bus platforms on the outside of the transit plaza. This alternative maintains the Shattuck Avenue couplet and substantially widens the east and west sidewalks to improve pedestrian circulation. An exclusive pedestrian signal phase at Center Street could allow pedestrians to easily make the short crossings to the transit plaza.

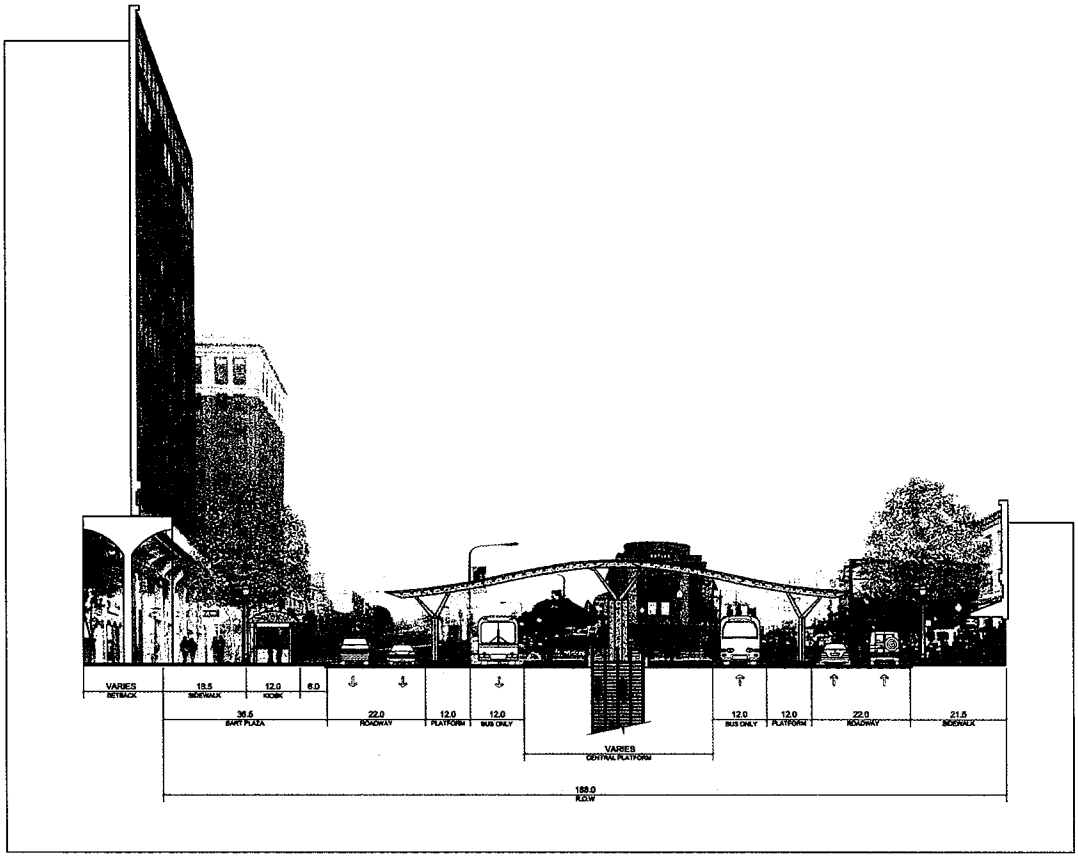
This alternative maximizes the functionality of the transit area with close integration of BRT, local bus, and BART in one place. It connects to the history of the Downtown and will orient those arriving by transit to where they are in the Downtown. This alternative, like Option 3 has potentially substantial cost implications of moving the primary BART entry/exit. The new entry/exit would include stairs, escalators, and two elevators. Canopies over the secondary entries and two new escalator/stair entries—to replace the existing elevator entry and the rotunda—would provide improvements to BART access.

The bus islands located in the center of Shattuck Avenue need to be properly designed and sized for expected demand to prevent blocking of through pedestrian movements. This alternative would remove all parking from Shattuck Square, but would expand on-street parking on the west side of Shattuck Avenue. This alternative would also require the relocation of the open space function of the existing plaza to another location in the Downtown Area. Bicycle circulation through the area also needs to be considered in this alternative. While auto traffic would not be permitted to cross Shattuck Avenue at Center Street, if designed correctly, the transit plaza could allow bicycle traffic to traverse the area along Center Street.

In this alternative, if the exclusive bus lanes could be configured in a "contra-flow" layout (with northbound buses on the west leg of Shattuck Avenue and southbound buses on the east leg) the central plaza could be expanded to be more substantial since bus boarding islands would no longer be necessary. This would allow more comfortable waiting areas and even more direct transfers, but could cause traffic planning problems on either side of the Study Area. This study has not been able to look in detail at the implications of this concept.



Section Through Shattuck Avenue at Addison Street



Section Through Shattuck Avenue and BART Plaza at Center Street

Figure 3.9: Option 4 Sections

DESIGN ISSUES	OPTION 1: EXISTING STREET LAYOUT	OPTION 2: REMOVE SHATTUCK COUPLET
1. Shattuck Configuration	▪ No change in basic configuration of Shattuck (exclusive bus lanes added and left turns removed) ▪ Most existing curbs remain	▪ Shattuck couplet removed (two lanes each direction north of Center Street) ▪ East side of Shattuck Square with 1 NB lane + Bus-Only lane
2. Primary BART Entry	▪ Existing entry remains ▪ Structure is enhanced to provide stronger urban design statement ▪ Reconfigured to improve relationship with plaza and integrate new functions ▪ Potential 2nd BART elevator – location to be determined	▪ Existing entry remains ▪ Structure is enhanced to provide stronger urban design statement ▪ Reconfigured to improve relationship with plaza and integrate new functions ▪ Potential 2nd BART elevator – location to be determined
3. Center Street Treatment	▪ East of Shattuck: New curb extensions at Shattuck with potential to close Center Street to traffic ▪ West of Shattuck: Increase in sidewalk width on north side ▪ Shattuck Intersection: Left turns not allowed from Shattuck to Center	
4. Open Space Program	▪ Primary open space remains west of Shattuck adjacent to BART entry ▪ Integrate new program elements into rotunda and possibly in free-standing kiosks	▪ Primary open space remains on west side of Shattuck adjacent to BART entry ▪ Integrate new program elements into rotunda and possibly in free-standing kiosks ▪ Secondary open space on east side of Shattuck at Center Street
5. Bus Circulation	▪ BRT in center-running dedicated lanes sharing with most local buses – reconfiguration could occur without BRT ▪ NB bus stops concentrated north of Center ▪ SB bus stops both north and south of Center ▪ Bear Transit/Shuttles with curb stops	▪ BRT in center-running lanes south of Center – reconfiguration could occur without BRT ▪ Requires special signal phase for NB buses @ Center Street ▪ NB BRT and local bus consolidated on east side of Shattuck Square ▪ SB BRT and local bus on Shattuck at Allston Way ▪ Bear Transit/Shuttles with curb stops
6. Pedestrian Circulation	▪ No change in pedestrian circulation ▪ Some side street crossing distances narrowed with curb extensions ▪ Widening of east side of Shattuck between Allston and Center	▪ Shattuck crossing distances narrowed ▪ Widened pedestrian promenade on Center Street ▪ Some side street crossing distances narrowed with curb extensions ▪ Widening of sidewalks along various portions of the east side of Shattuck and Berkeley Square
7. Bicycle Circulation	▪ Center Street remains primary EW route	▪ Center Street remains primary EW route
8. Curb Functions	▪ Minimum curb changes; some new curb extensions ▪ Street parking eliminated on both sides of Shattuck Square; Street parking reduced by 10 spaces ▪ Increased sidewalk on east side Shattuck (bus stop eliminated)	▪ Street parking eliminated on both sides of Shattuck Square; street parking reduced by 6 spaces ▪ Potential for drop-off on east side of Shattuck

Table 3.1: Sketch alternatives comparison matrix.

OPTION 3: NEW ENTRY/NO COUPLET	OPTION 4: NEW CENTER TRANSIT PLAZA
▪ Shattuck couplet removed (two lanes each direction north of Center Street) ▪ East side of Shattuck Square with two-way local traffic	▪ No change in basic operation of Shattuck (Exclusive bus lanes added and left turns removed) ▪ Reconfiguration of roadway alignment to accommodate new BART entry location
▪ Removes BART rotunda and relocates the primary BART entry/exit to east side Shattuck with 2 new elevators ▪ Removes (E) BART elevator and replaces with stair and single escalator entry	▪ Removes BART rotunda and relocates the primary BART entry/exit to center median south of Center Street with 2 new elevators – canopy could create "transit station" covering buses and BART entry ▪ Removes (E) BART elevator and replaces with stair and single escalator entry ▪ Replaces BART rotunda entry with new stair and single escalator entry
▪ East of Shattuck: New curb extensions at Shattuck with potential to close Center Street to traffic ▪ West of Shattuck: Increase in sidewalk width on north side ▪ Shattuck Intersection: Left turns not allowed from Shattuck to Center	▪ East of Shattuck: New curb extensions at Shattuck with potential to close Center Street to traffic ▪ West of Shattuck: Increase in sidewalk width on north side ▪ Shattuck Intersection: no through traffic on Center
▪ Primary open space shifted to east side of Shattuck ▪ Secondary open space on west side on wide sidewalk (approximately 35 feet)	▪ Transit plaza at Center Street in center median ▪ Widened sidewalk on both sides of Shattuck ▪ If Center Street east of Shattuck is closed to vehicular traffic it has the potential to become the primary public open space
▪ SB BRT in center-running lane and NB BRT lane along the curb north of Allston ▪ Requires special signal phase for NB buses @ Allston ▪ Bus stops consolidated on Shattuck at Allston Way ▪ SB Bear Transit/Shuttle on west side Shattuck Avenue at Allston Way, NB Bear Transit/Shuttle on east side of Shattuck Square north of Center Street	▪ BRT and local bus in center-running lanes ▪ Center Street—reconfiguration could occur even without BRT ▪ Bear Transit/Shuttle in curb stops
▪ Some Shattuck crossings narrowed (south side @ Center, north side @ Allston) while some widened (north side @ Allston and @ Addison) ▪ Direct pedestrian connection from BART to University ▪ Expanded sidewalks throughout project area ▪ Some side street crossing distances narrowed with curb extensions ▪ Crossing distance increased to five lanes on West Shattuck @ Center Street	▪ Crossing distances narrowed with new median at Allston Way ▪ Pedestrian "scramble" signal phase at Center Street and Shattuck transit plaza ▪ Expanded sidewalks throughout project area
▪ Center Street remains primary EW route	▪ Center Street remains primary EW route. Potential for some conflicts between through cyclists and pedestrians at central transit plaza
▪ Some Street parking eliminated along Shattuck Avenue; street parking reduced by 8 spaces ▪ Potential for drop-off on west side of Shattuck	▪ Street parking eliminated on both sides of Shattuck Square; Downtown parking reduced by 10 spaces ▪ Limited drop-off along Shattuck

Alternatives Considered and Rejected

There were additional alternatives considered as part of the planning process. However, due to their limitations, these alternatives were not developed to a substantial level of detail.

Two-Way East Side Shattuck Avenue

One suggested alternative would reconfigure Shattuck Avenue from a couplet north of Center Street into a 4-lane road to the east of Shattuck Square with a plaza on the west side of Shattuck Avenue. This alternative, however, would have a significant impact on the pedestrian quality of Shattuck Avenue. The existing 78.5-foot right-of-way on the east leg of Shattuck Avenue is not wide enough to provide two lanes in each direction, on-street parking, and sidewalks at the existing width. If parking were retained, sidewalks would need to be narrowed to less than ten feet on each side, while removing on-street parking would place fast-moving traffic adjacent to pedestrians without an adequate buffer. For these reasons, this alternative was rejected as part of this process.

Bus-Only on East Side Shattuck Avenue

This alternative would reconfigure Shattuck Avenue, removing the existing couplet to create a bus mall on the east side of Shattuck Square. This option is not feasible given the current plans for the UC hotel and conference center complex (to be located on the present Bank of America site) which call for an auto entry from Shattuck Avenue, and would require direct drop-off access for taxis and autos.

3.3 Sub-Alternatives

Some design considerations are independent of the alternative treatments of Shattuck Avenue and the primary open space areas described above. In order to develop an understanding of these important considerations, the consultant team generated sub-alternatives to study a range of potential treatments of Center Street and locations for a Bike Station. These sub-alternatives are independent of the larger sketch concepts, but, in the case of the Bike Station, are somewhat dependent on larger design decisions.

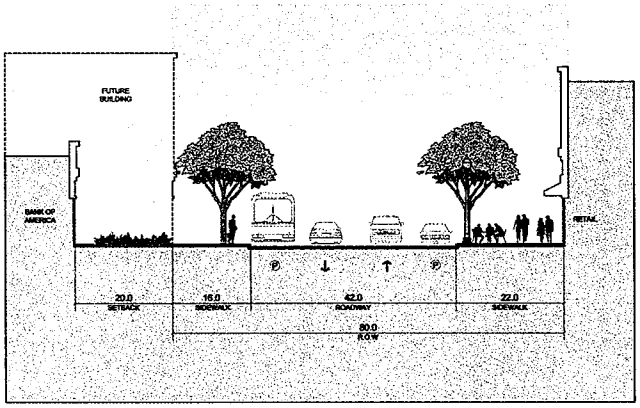


Figure 3.10: Existing Center Street configuration (view towards Oxford Street)

Center Street

One of the Study Area variables not directly addressed in the sketch alternatives is the treatment of Center Street. All of the sketch alternatives illustrate minor improvements to Center Street with new curb extensions on the east of Shattuck Avenue and increased sidewalk width west of Shattuck Avenue (see Figure 3.11). However, community stakeholders identified the potential for more substantial changes to Center Street. These alternatives have implications for the ultimate design of the Study Area and the functions of the public spaces in the Downtown Area.

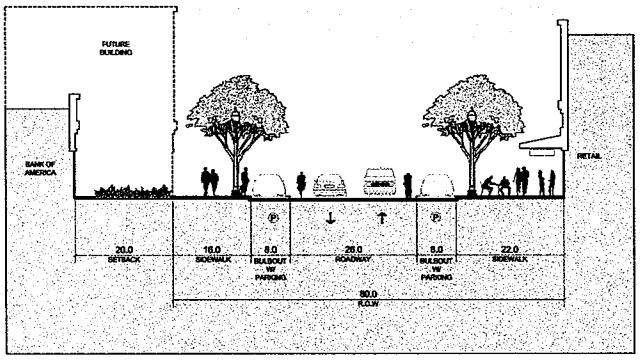


Figure 3.11: Basic improvements

One-Way Center Street

This option allows for one-way vehicular traffic (see Figure 3.12). The expanded sidewalk accommodates a 20-foot wide pedestrian/bike promenade establishing a strong connection between Downtown and the UC campus. This alternative has the potential to incorporate a landscape feature that evokes Strawberry Creek, as well.

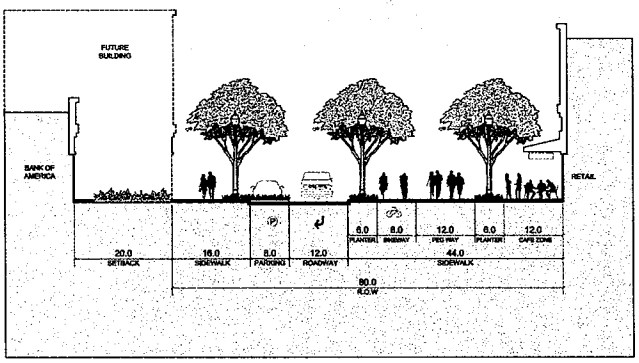


Figure 3.12: Major improvements with One-Way Center Street

Closure of Center Street

This option closes Center Street to all auto access, except emergency and service vehicles (see Figure 3.13). A 44-foot wide flexible space could accommodate concerts, fairs and large gatherings with improved bicycle/pedestrian circulation, and would be flanked on either side with outdoor seating and cafe space. This alternative can incorporate additional landscaping and a creek feature, as well. This option is especially relevant to Option 4 where Center Street east of Shattuck Avenue has the potential to become a new site for primary open space that is replaced with the central transit plaza in that configuration.

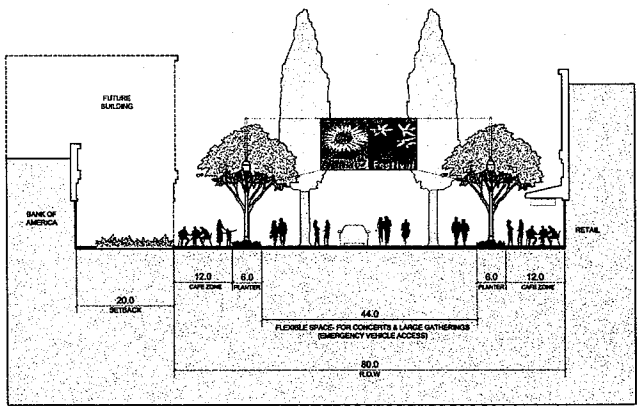


Figure 3.13: Closure of Center Street with no auto access

Figure 3.14: All of the sketch alternatives have the potential to improve existing surface bike parking.

Figure 3.15: Example of a store front bike station in Seattle. (Source: BART)

Figure 3.16: Chicago bike station at Millenium Park. (Source: BART)

Figure 3.17: Fruitvale BART bike station. (Source: BART)

Bike Station/Bike Parking

The existing bike station opened in 1999 and is located at the south end of the concourse level of the BART station. It is currently over capacity and causes circulation issues within the BART station. BART, the City, and Bicycle-Friendly Berkeley Coalition (BFBC) (a local nonprofit advocacy organization that staffs the bike station) have explored various alternatives for reconfiguring the bike station at the concourse level or moving the facility to a street-level storefront. The City has received a $582,920 grant to reconstruct the bike station and expand its capacity.

This study has looked at the potential to locate the bike station within the BART Plaza as a way to activate the space and provide improved accessibility and function of the bike station. A plaza-level configuration has been studied for each sketch alternative, with a program similar to the plans for other locations.

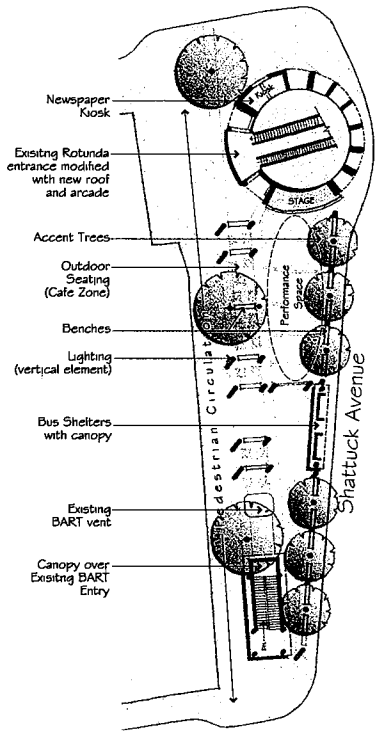
In Options 1 or 2 there is the potential to add a bike structure at the plaza level which is linked to the planned bike station at the concourse level. The structure would need to be approximately 17 feet tall to allow construction of two levels of double-height storage (four bikes tall, as at the Fruitvale BART Bike station). The plaza level could accommodate approximately 100 bikes with a cafe and small office space. The vertical circulation to the concourse-level storage area would need to be determined in more detail if this concept is pursued.

Options 1 and 2 would also allow for a plaza-level, stand-alone bike station. However, a station that would accommodate the program required would occupy a large portion of the usable area on the plaza.

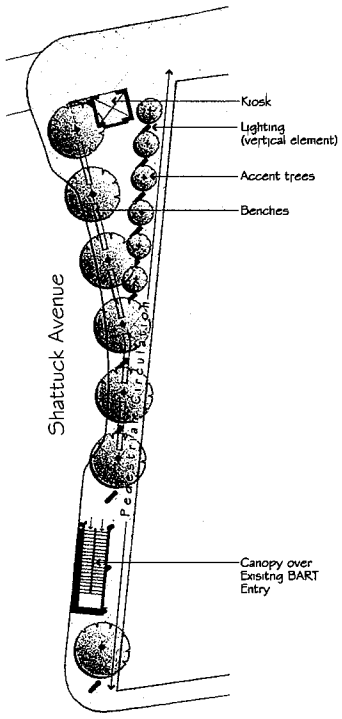
Options 3 and 4 both have the potential to integrate a new bike parking structure at the street level with the new BART entry/exit. The bike station concepts studied in both alternatives accommodate approximately 300 bikes in two floor levels with triple stacking storage of bikes with a footprint of approximately 2,000 square feet. The facility would also include an office/transit kiosk, rest room, and a 600 square foot retail space. A bike station in both Option 3 and 4 would occupy a large portion of the usable public space and could cause some circulation and site line obstructions. Option 4 has more limited opportunity given the space constraints and the height of the structure required (approximately 28 feet tall) for stacking bikes

Open Space Details

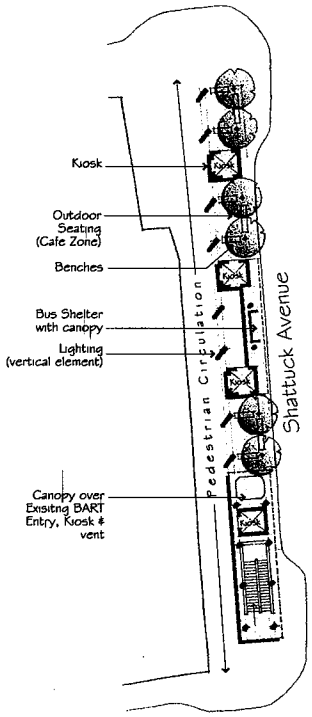
Some of the detailed design considerations were explored during the sketch alternative phase. The illustrations in Figure 3.18 show some options for open space configurations, and Figure 3.19 shows some considerations of their elements and materials that will create successful public spaces in all of the alternatives.



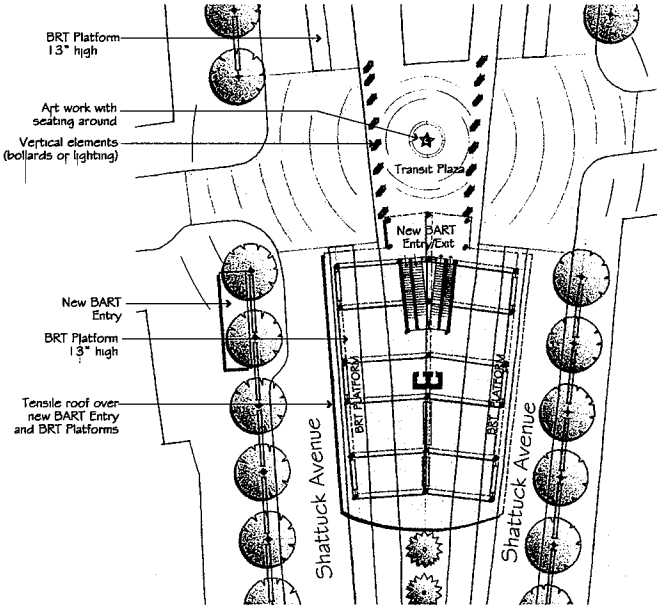
Option 1 & 2



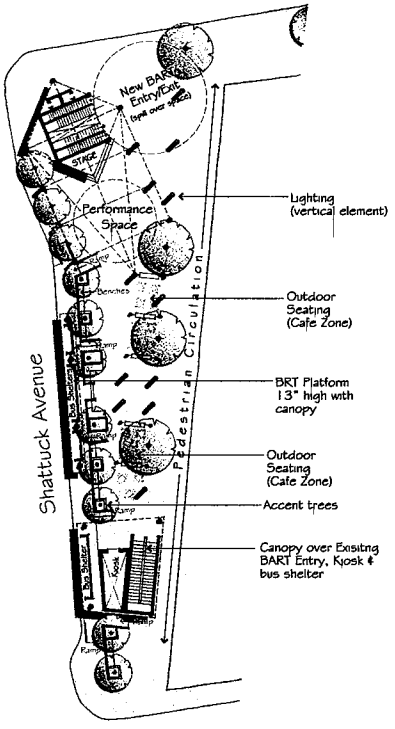
Option 2



Option 3 & 4

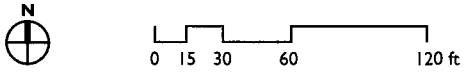


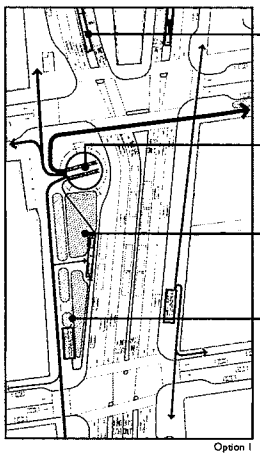
Option 4



Option 3

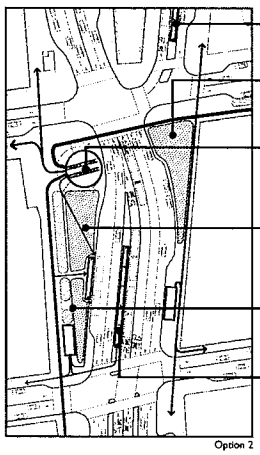
Figure 3.18: Detailed public space design options for each sketch alternative.





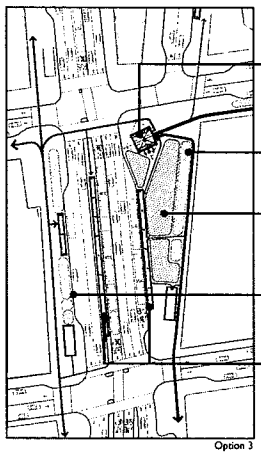
Option 1

- BRT shelters provide waiting area and visibility.
- BART Rotunda entrance modified with new roof & arcade to improve edge conditions and visibility as landmark.
- Plaza open space redesigned to better serve as a public gathering place and space for concerts or other performances.
- (3) Sidewalk Zone provides space for cafes and/or kiosks, as well as pedestrian circulation.



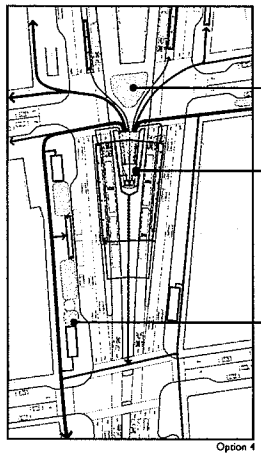
Option 2

- BRT shelters provide waiting area and visibility.
- Plaza open space provides new landscaped area or other gathering space
- BART Rotunda entrance modified with new roof & arcade to improve edge conditions and visibility as landmark.
- Plaza open space redesigned to better serve as a public gathering place and space for concerts or other performances.
- (3) Sidewalk Zone provides space for cafes and/or kiosks, as well as pedestrian circulation.
- BRT shelters provide waiting area and visibility.



Option 3

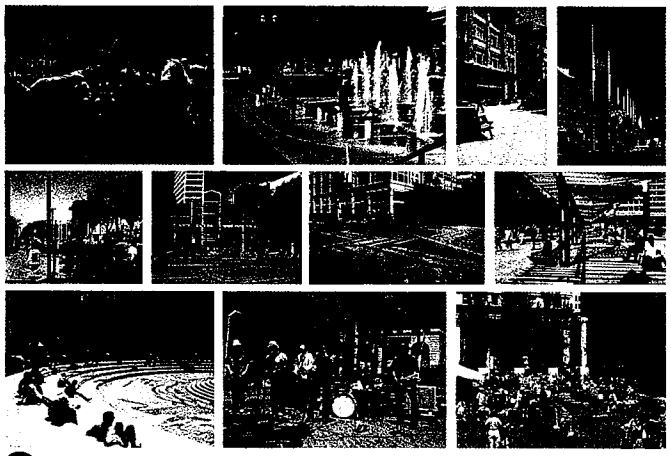
- New BART entrance provides visibility as landmark with active edges.
- (3) Cafe zone provides new program opportunities for adjacent retail spaces.
- Plaza open space provides public gathering place and space for concerts or other performances.
- (3) Sidewalk Zone provides space for cafes and/or kiosks, as well as pedestrian circulation.
- BRT shelters provide waiting area and visibility.



Option 4

- (3) Creates plaza that orients those arriving by transit to Downtown, as well as waiting area and meeting point.
- New BART entrance combined with BRT canopy provides strong transit visibility and identity to Downtown area.
- (3) Sidewalk Zone provides space for cafes and/or kiosks, as well as pedestrian circulation.

Transit Architecture/Canopies



Plaza/Gathering Space

(3) Sidewalk/Cafe Space

(4) Design Details: Landscaping/Lighting

Figure 3.19: Illustration of detailed design considerations and the relationship to each sketch alternative.

3.4 Community Input on Sketch Alternatives

The four sketch alternatives and concepts for Center Street and the bike station were presented to the general public at a community workshop in April 2006.

The workshop had very good attendance (±100 attendees) and generated a lot of good comments and dialogue about the issues raised in the sketch alternatives. As indicated in the table at left, participants gave clear direction in support of the two alternatives that include more extensive and dramatic change (Options 3 and 4), but there was not clear direction about which alternatives to drop from further study.

	Preferred Alternative	Rejected Alternative
Option 1	6 (15%)	19 (29%)
Option 2	3 (8%)	15 (23%)
Option 3	19 (49%)	15 (23%)
Option 4	11 (28%)	16 (25%)
Total Responses	**39 (100%)**	**65 (100%)**

NOTE: Participants were able to choose more than one preferred or rejected alternative, resulting in different totals for the two questions.

Table 3.2: Community input on sketch alternatives from Workshop #2 in April 2006.

The comments on each of the alternatives reflected the need for further study of several key issues that impact the evaluation of the sketch alternatives. These issues include:

- **Configuration of Shattuck Avenue between Center Street and University Avenue:** Many participants felt that Option 3 provided the best way to address area-wide concerns about pedestrian safety, especially at the Shattuck Avenue/University Avenue intersection. Others felt that the existing configuration can be modified in less dramatic ways, and that the couplet is an important feature of the Downtown. In the alternatives that create a two-way street on the west leg of Shattuck Avenue, the design and function of the east leg becomes an important consideration.
- **Enhanced Bus/BRT:** Many participants felt strongly on both sides of the issue of bus enhancements, including dedicated lanes and consolidated loading areas. Some participants felt strongly that enhanced bus would benefit Downtown by bringing more people into the area and better organizing bus access in the Downtown. Others felt there would be too great an impact on auto access and circulation and potentially retail function.
- **Center Street:** Some participants felt strongly that Center Street should be closed or reduced to one-way traffic. Others felt that Center Street should remain as it is currently configured. The treatment of Center Street has an impact on which alternatives are preferred, especially in cases where the primary open space is either adjacent to Center Street (Option 3) or where there is no major gathering space within the Study Area (Option 4).
- **Costs and Implementation:** This sketch alternative process was primarily focused on creating a long-term vision for the Study Area, and did not address cost

issues in any detail. Some participants felt construction costs might have a significant impact on the feasibility or implementation time frame of the designs, especially Options 3 and 4.

The resolution of these issues is beyond the scope of this study, which is intended to develop a concept-level set of capital improvements for the Study Area. For this reason, this study recommends the implementation of improvements in the short-term that are consistent with the more extensive changes of both the Options 3 and 4. The detailed design and function of both Options will require further study prior to implementation.

The key elements of Option 3 and 4 are summarized in Table 3.3.

OPTION 3	OPTION 4
▪ Removes BART Rotunda and relocates the primary BART entry/exit with two elevators, escalators and stairs.	
▪ Two-way traffic on the west side of Shattuck with straightened alignment. A local serving street on the east leg of Shattuck Avenue between Center Street and Addison.	▪ No change in basic operation of Shattuck (exclusive bus lanes added and left turns removed). Reconfiguration of roadway alignment to accommodate new BART entry location.
▪ Locates the new open space on the east side of Shattuck Avenue adjacent to the BART Entry with a secondary open space on the west side on wide sidewalk.	▪ Locates transit plaza at Center Street in center median with widened sidewalk on both sides of Shattuck. If Center Street east of Shattuck is closed to vehicular traffic, it has the potential to become the primary public open space.
▪ Enhancements to bus circulation, including consolidating loading areas and potentially including exclusive bus lanes.[3]	
▪ Direct pedestrian connection from BART to University.	▪ Pedestrian "scramble" signal phase at Center Street and Shattuck transit plaza.

Table 3.3: Key Elements of Option 3 and Option 4

If the reconfiguration of Shattuck Avenue north of Center Street to a two-way street on the west side of Shattuck Square proves to be infeasible, elements of Option 4 should be reconsidered.

[3] While exclusive bus lanes are not a requirement of the Preferred Alternative, they do allow for greater consolidation of loading areas. Without exclusive lanes, more curb space must be given to bus stops, since buses have to enter and exit traffic flow. For this reason, exclusive bus lanes have the secondary benefit of freeing curb space for loading and drop-off or short-term parking, in addition to the bus circulation benefits.

4 Concept Plan

There is clear direction from the workshop participants and other stakeholders that a long-term vision for the Study Area involves major changes to the BART primary entry and other circulation changes. Given this direction, there is still ample opportunity for short-term improvements that can begin to implement the framework of the long-term vision. The Concept Plan in this study is focused on these short-term improvements that can be made to create an improved environment now, while setting the stage for future change. The proposed improvements include only minor changes to existing curb locations and can be implemented regardless of the final long term vision.

4.1 Short-Term Improvements

Identified Needs

In addition to the needs identified in Section 2 of this report, participants at the April community workshop gave additional input on the program for the plaza. Participants were asked two questions about the programming of the plaza space: (1) how should the plaza look and feel? and (2) what are your priorities for programming the plaza? Participants were given a list of adjectives for the first question and a list of program elements for the second. The answers given by participants are summarized in Table 4.1.

The bolded responses are the elements mentioned the most frequently. This summary shows that while there is some support on both sides of some issues (modern vs. historic, or sunny vs. shaded, for example) there is generally support for a vital urban open space that embraces the transit and people-watching functions without attempting to be overly formal and intimate. These responses have contributed greatly to the proposed improvements.

Look and Feel	Responses		Plaza Program	Responses	
Active	***22***	***(50%)***	***Sit and watch others***	***23***	***(52%)***
Spacious	***22***	***(50%)***	***Landscaping***	***21***	***(48%)***
Treed	***18***	***(41%)***	***Sit and wait for transit***	***21***	***(48%)***
Sunny	***18***	***(41%)***	***Café Space***	***19***	***(43%)***
Fun	***17***	***(39%)***	Bike Station	14	*(32%)*
Civic	***17***	***(39%)***	Food vendors or kiosks	11	*(25%)*
Busy	***16***	***(36%)***	Performance Stage	7	*(16%)*
Relaxed	***16***	***(36%)***	Public Art	6	*(14%)*
Shaded	***16***	***(36%)***	Sit and read a book	4	*(9%)*
Historic	14	*(32%)*			
Modern	12	*(27%)*			
Calm	10	*(23%)*			
Quiet	10	*(23%)*			
Grassy	8	*(18%)*			
Noisy	7	*(16%)*			
Big	6	*(14%)*			
Cozy	3	*(7%)*			
Passive	2	*(5%)*			
Small	1	*(2%)*			
Total Responses:	**44**				

Table 4.1: Community input on plaza programming from Workshop #2 in April 2006

4.2 Proposed Improvements

The proposed short-term capital improvements address many of the needs that have been identified for the plaza. The key features of the improvements are:

"Re-Zoning" of the BART Plaza

The existing plaza lacks clearly defined zones of activity. The redesign creates a wide sidewalk zone with the potential for café seating between the sidewalk and main plaza area and a transit zone along the street edge. The zone in between these more programmed zones is meant to be informal and flexible to allow for concerts, buskers, conversations, or other impromptu, unplanned activities.

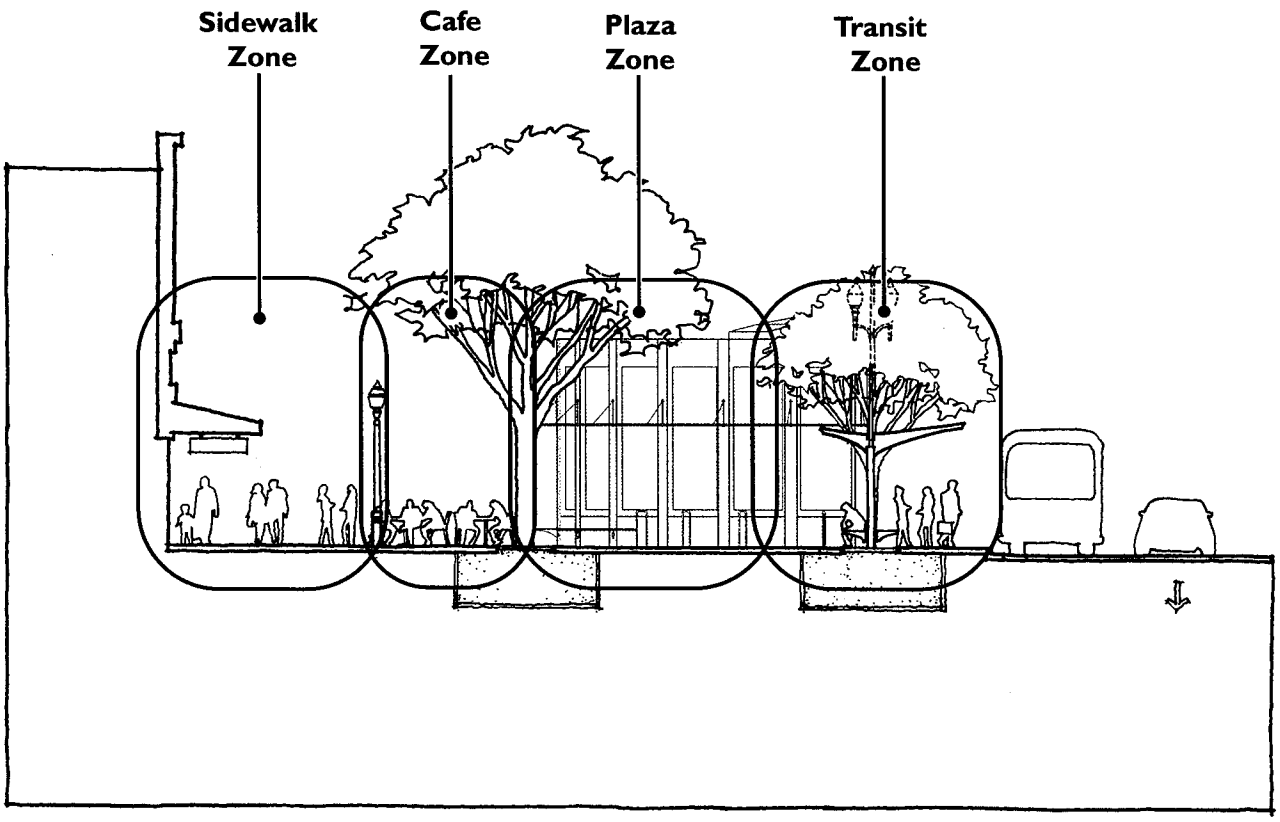


Figure 4.1: "Rezoning" of the BART Plaza

Sidewalk Zone

The sidewalk zone is widened from the existing ±12-foot clear area to a ±17-foot clear area. Fixed obstacles, such as lighting, newspaper boxes, and bike parking are removed from the sidewalk zone to allow for flexible use of this space and to increase the capacity of the sidewalk. Movable store signage or even several café tables could be incorporated into the building edge without diminishing the concept of the sidewalk zone.

Café Zone

The café zone occupies the area between the sidewalk zone and the future curb line. The café zone is approximately 18 feet wide. Trees, lighting and bollards are all located within the café zone, which could also have movable seating associated with cafés fronting on the plaza, as well as movable planters. The cafe zone is sheltered and separated from Shattuck Avenue by the plaza and Transit zone which provide an adequate buffer from the traffic on Shattuck Avenue.

Transit Zone

The transit zone occupies the street edge, and includes a bus canopy (described in more detail below) as well as landscaping, lighting, and signage. The transit zone is approximately 15 feet wide from the curb edge to the back of the canopy (this area is flexible to expand if there is a need to accommodate additional transit patrons).

Plaza Zone

Between the café zone and the transit zone is an open area that can be used flexibly by buskers or other plaza users. The lack of furnishings in the plaza zone enables easier path of travel for the pedestrians and transit users, and provides flexibility for special activities and events. The plaza zone can also be expanded for special events if the café zone is cleared of furniture, allowing the open area to expand if warranted.

Preparing Today for Future Improvements

The curb line for the future west side of Shattuck Avenue under an eventual long-term reconfiguration can be established today. The café zone, larger street trees, and street lighting will all serve to establish the future location and conditions of the curb. At the same time, the short-term improvements have been designed to function as a cohesive whole until the final vision has been designed and implemented.

Figure 4.2: The concept plan will widen the existing sidewalk zone to facilitate pedestrian circulation.

Figure 4.3: The concept plan will create a café zone similar to Center Street that will be buffered from the adjacent street by the Plaza and Transit zones..

Figure 4.4: The concept plan will create an improved transit zone at the curb that removes existing obstructions and facilitates bus/BART transfers. It also creates a plaza zone that can function as a gathering place for events.

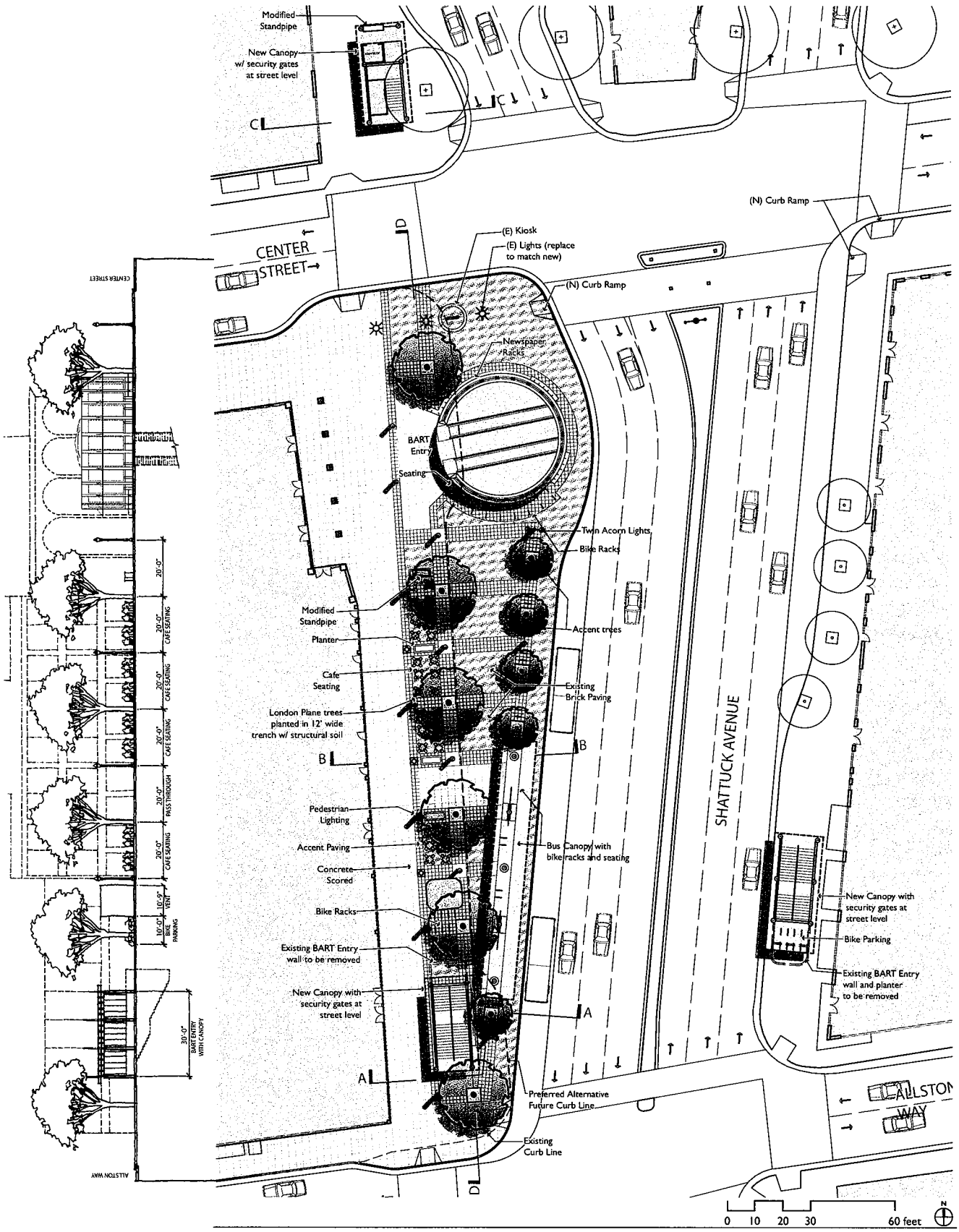
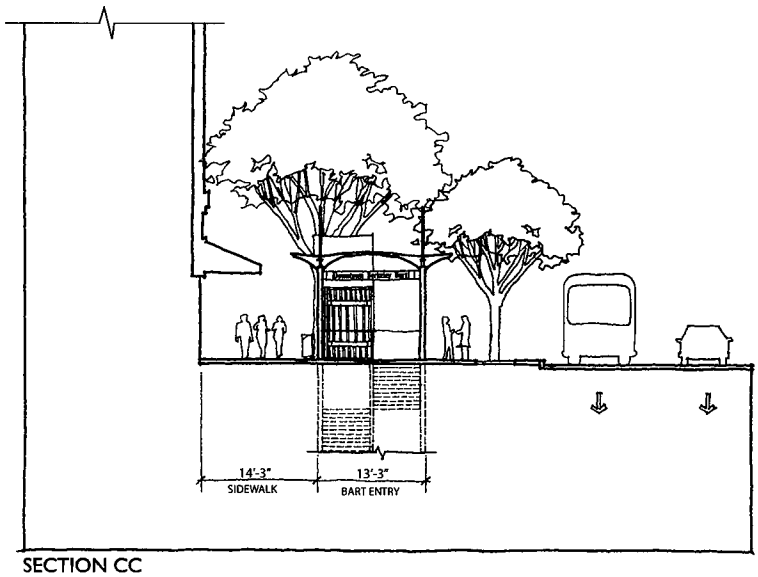
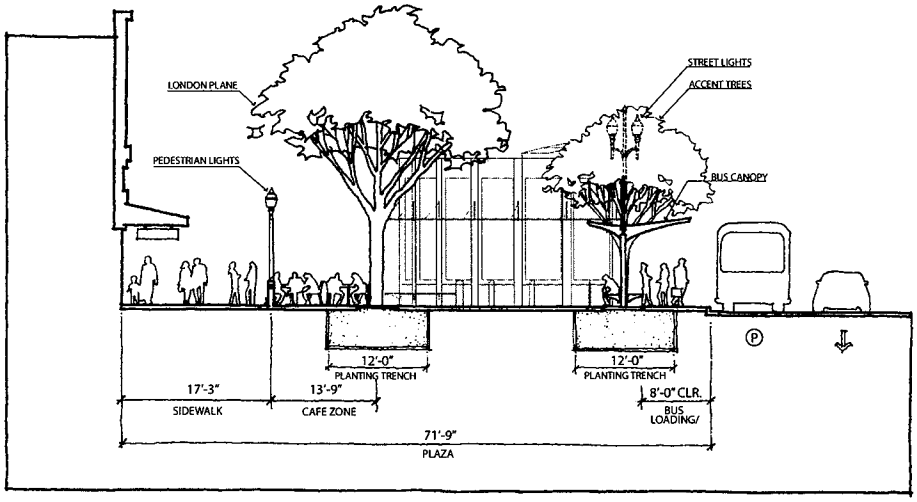


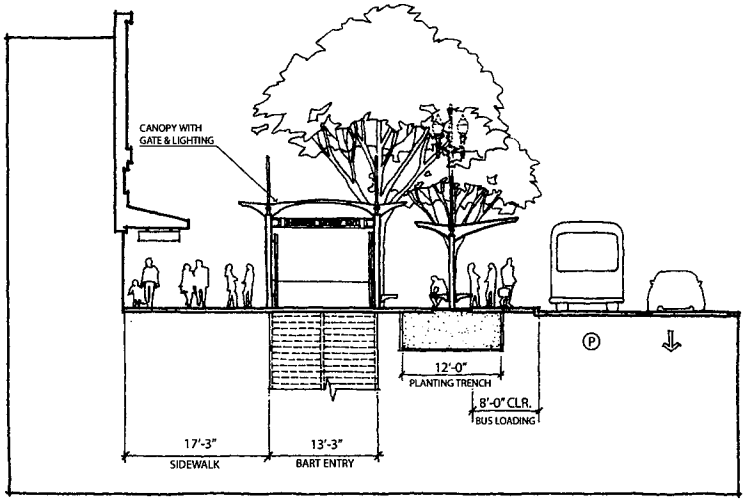
Figure 4.5: Concept Plan and Elevation (looking west) showing short-term improvements.



SECTION CC



SECTION BB



SECTION AA

Figure 4.6: These sections through the plaza show the different components of the concept plan.

Figure 4.7: Transit canopies, such as this example from Bilbao, Spain, can help create a vibrant identity for the Downtown Berkeley BART plaza.

Developing a "Transit Architecture" for the Downtown

Secondary BART Entries

New canopies over the secondary BART entries will improve the visibility of these features and protect against the rain. Bringing after-hours security gates up to street level will address maintenance and security concerns. These canopy structures can incorporate signage, lighting, and seating on the edges, and the roofs can be extended to provide some covered bike parking areas as well. Canopies are proposed for all five secondary BART entries. The design of the canopies should be consistent, but can include some variation to relate to the different contexts of the secondary entries (e.g. the entries adjacent to the Arts District could have special features, possibly public art, to denote this location).

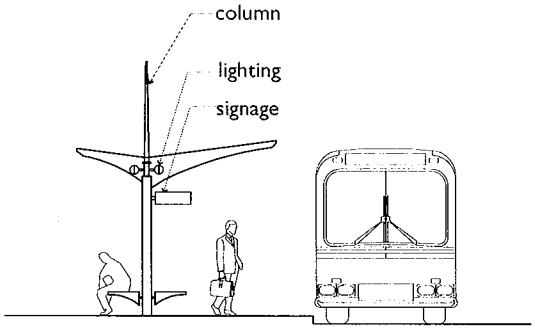


Figure 4.8: Bus canopy section.

Bus Canopies

A multi-function bus canopy with a unique design will improve the visibility of the bus stops on the BART Plaza, increase the effective waiting area, and establish a framework for future bus stop enhancements. The canopy incorporates adequate seating, with panels for the display of information and to provide weather protection. The canopy is designed to be well lit with adequate protection from sun and rain. The columns supporting the bus canopy leave adequate space in between for through movement, and some bike parking is also planned between the columns. The bus shelter maintains a clear 8-foot wide space from the curb to facilitate the continuous use of the curb for loading/unloading.

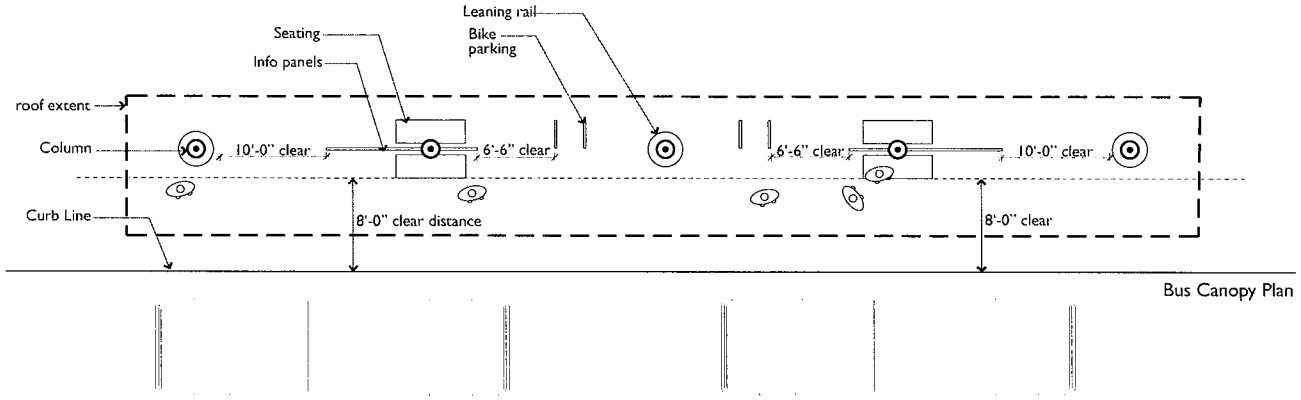


Figure 4.9: Bus canopy plan showing the various elements incorporated into the design.

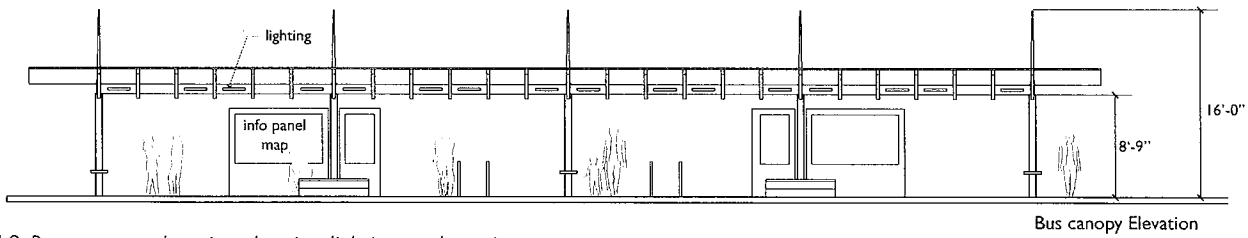


Figure 4.10: Bus canopy elevation showing lighting and seating.

BART Rotunda

Modifications to the "skin" of the rotunda can also complement these improvements. There are a range of possible improvements, from replacing the smoked glass with clear glass to replacing the panels of the structure with a new system that incorporates seating, new glazing, and a shading structure (as illustrated in Figure 4.11). The primary goals of the modification are to make the rotunda more transparent and to lighten its color. The final design of the rotunda improvements should be determined once the long-term vision is finalized. If the long-term vision for the Study Area includes relocating the primary BART entry/exit, the investment in the rotunda should be minimal.

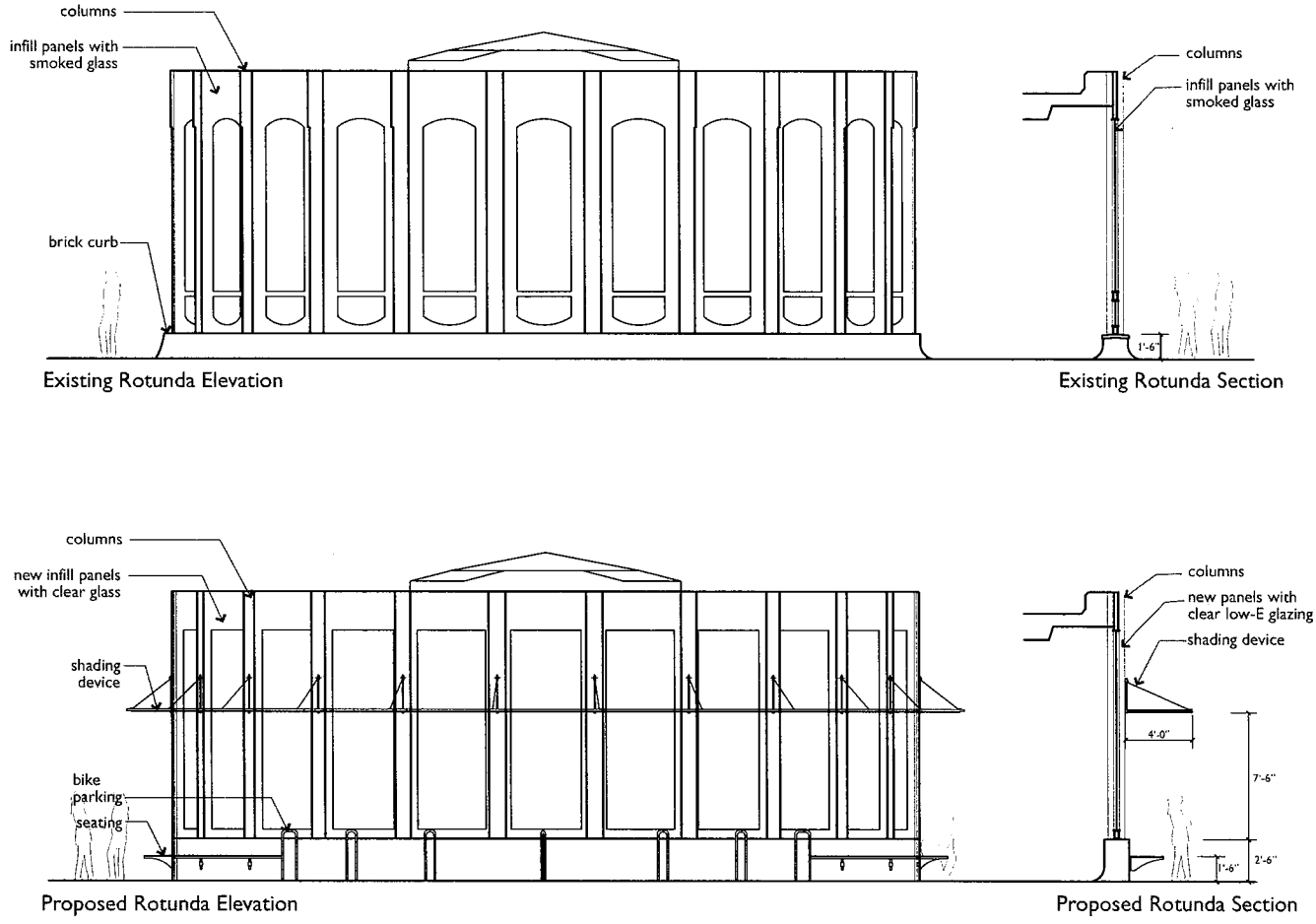


Figure 4.11: The scope and detail of improvements to the BART rotunda can be finalized once the long-term vision for the study area is clear.

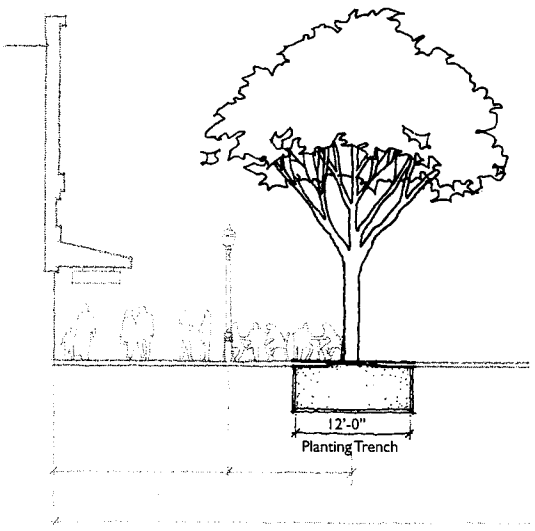


Figure 4.12: Planting trench detail at the plaza.

Relating to the Downtown District While Preserving Unique Aspects of the BART Plaza

The existing unmatched light fixtures and cobra head street lights are replaced by a combination of standard Downtown fixtures found elsewhere on Shattuck Avenue (acorn head, pedestrian-scale lights and double-head gateway street lights). The brick paving is retained on the curb side of the café zone (the area that may be modified in the long-term improvements), but can be replaced in other areas by paving that blends with other areas of the Downtown (scored concrete, with some accented areas to define the café zone). In addition, the existing brick facing of the secondary BART entries, vent structure, and elevator is replaced with more subtle materials and a design that minimizes the size of these structures, such as plaster or concrete.

London Plane (*Platanus x acerifolia*) trees, the same species planted during the recent Downtown streetscape improvements project, are planted along the café zone to define the future street edge. The London Plane trees are approved by the City's arborist and resolve many problems associated with the Pittosporum species that are currently planted in the Plaza. Smaller accent trees, Red Sunset Maple (*Acer rubru*), are planted along the transit zone to preserve visibility across the plaza while still providing landscaping. While there are maintenance concerns about the leaves from deciduous trees, this study recommends the use of deciduous trees in order to be consistent with existing Shattuck Avenue landscaping and to provide solar access to the plaza in winter. The proposed improvements have no net loss of trees in the plaza from the existing number.

The plan proposes an improved planting system for healthier trees. Presently, the individual tree pits in the plaza are challenged by the lack of space for tree root systems and poor soil conditions. Typically, soils located under pavement are highly compacted to meet load bearing requirements and engineering standards. These conditions stunt the growth of the trees. The proposed planting improvements include a continuous, twelve foot wide planting trench with structural soils for the trees in the plaza. Structural soils serve the multiple functions of encouraging root growth, satisfying pavement design and installation requirements, and increasing storm water holding capacity.

Structural soils are gap graded gravels that consist of crushed stone and clay loam which allow the roots to penetrate. The shift from individual tree pits to an integrated, root penetrable, high strength pavement system would help ensure the long term needs of the trees in the plaza.

The proposed improvements include the removal of raised planters to make way for clear sightlines and movements in the plaza. The existing raised planters are inadequately maintained, act as catch basins for rodents and cigarette stubs and are physical and visual barriers in the plaza. The proposed planters are

appropriately located and can be maintained through ownership by adjacent businesses.

Introducing Café Uses While Retaining Overall Flexibility

The proposed improvements include space for café uses associated with stores that front onto the plaza. While this will require private initiative, the success of Center Street shows that providing the space for these activities can invite adjacent businesses to provide outdoor seating. There are already several café-style businesses on this block of Shattuck Avenue, and this opportunity may attract additional businesses in the future. The proposed improvements do not incorporate free-standing kiosks or other retail uses because of the difficulty of implementing and managing those types of spaces and the difficulty of identifying the market for such uses.

Improving Disabled Access to Transit Facilities

The existing sidewalk ramps on the south and west sides of the Shattuck Avenue and Center Street intersection are rebuilt to improve disabled access. The south corners of Shattuck Avenue and Center Street are rebuilt with directional curb ramps, and the median crossing is improved with tactile domes. The west side of the Shattuck Avenue and Center Street intersection is rebuilt to include tactile dome panels and improve the width and flares of the curb ramps.

Improvements to Bike Parking

The existing bike parking on the plaza is replaced by updated inverted U-style racks. This style of rack will provide more overall capacity than the existing ribbon-style racks because they are more efficient. Racks should be located in concentrations adjacent to the BART rotunda and at the secondary BART entries, as well as in more distributed locations associated with the bus canopies and in other locations throughout the Study Area. This combination of concentrated zones and dispersed racks provides cyclists with a range of choices about where to park their bikes according to their needs and destinations. By improving the efficiency of bike parking with the inverted U-style racks, the short-term improvements will encourage increased use of bicycles to access the Downtown Area.

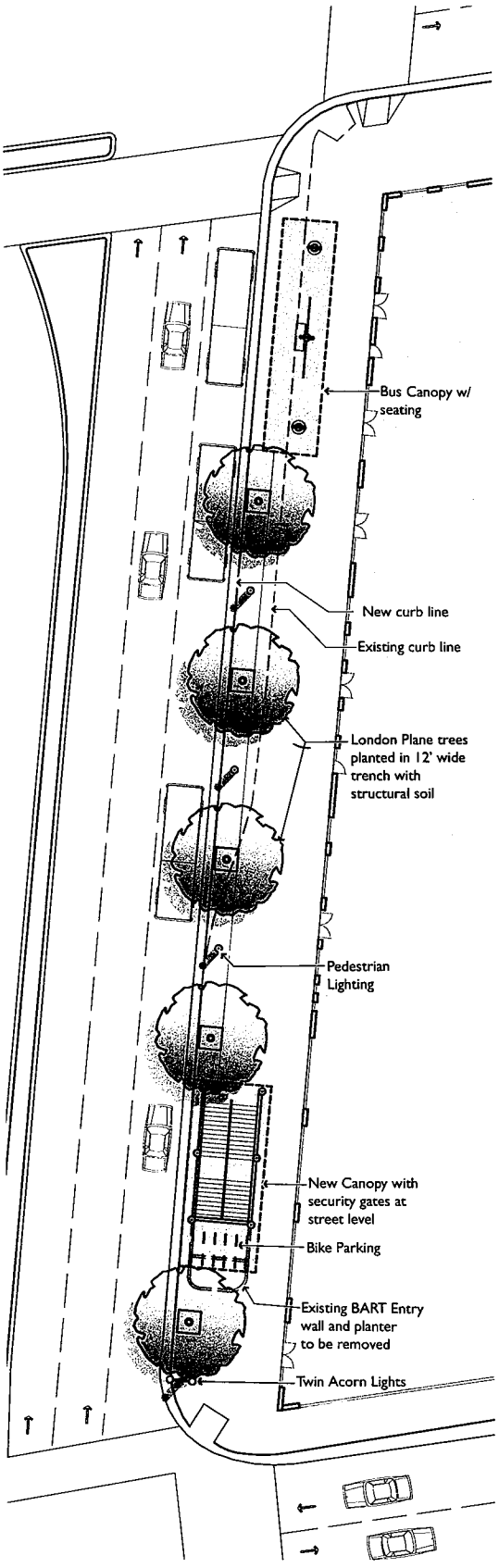


Figure 4.13: Potential reconfiguration of the curb on east Shattuck Avenue allows for a widened sidewalk with improved bus loading area.

4.3 Alternative East Side Shattuck Avenue Treatment

The short-term improvements do little to improve overall circulation and access within the Study Area, and bus stops elsewhere in the Study Area will still be pinch points for pedestrians. As a sub-alternative in the concept plan, there is the possibility to create a widened sidewalk on the east side of Shattuck Avenue between Center Street and Allston Way in order to improve the bus loading area and remove bus/pedestrian conflicts.

The existing sidewalk on the east side of Shattuck Avenue just south of Center Street is only 16 feet wide, which is narrow to accommodate existing pedestrian traffic, and is especially constrained at the bus stop in front of Games of Berkeley at Center Street.

The redesign creates a widened sidewalk approx 24 feet wide by removing the existing bus pullout. The bus stop would be moved to the curb, and buses would stop in the right-hand travel lane. The traffic implications of this option need to be analyzed in detail before moving forward with design development.

The existing trees and lighting are replaced with larger London Plane trees (with no net tree loss) and the same style of light fixtures used in the plaza concept design. These improvements would align with the elements of the plaza, thereby improving visual connectivity between the two sides of Shattuck Avenue.

The existing standard bus waiting area is replaced by a multifunctional bus canopy which helps improve both the visibility of the bus stop and increases the effective waiting area. The bus shelter maintains an 8-foot clear area from the curb for loading/unloading. Access to store-fronts, such as the Games of Berkeley, would be maintained and improved by widening the sidewalk.

The reconfiguration of the curb would allow the existing curb ramps to be replaced with wider directional curb ramps that improve ADA access in the area.

4.4 Project Phasing and Other Considerations

The proposed short-term improvements still represent some significant capital costs. This may require the improvements to be phased over time, especially while the long-term vision remains undecided. In order to address this issue, it is important to consider phasing of the short-term improvements, as well as some other key considerations.

Priority Improvements

This study recommends the improvements to the secondary entries on the west side of Shattuck Avenue as priority improvements in order to establish the vocabulary of the improvements in the area. The west side of Shattuck Avenue, within the sidewalk zone, would have the least anticipated change under any of the long-term scenarios considered in this study, so improvements to these three entries (at Allston Way leading to the bike station, at Center Street with the elevator, and at Addison Street leading to the Arts District) should be prioritized.

In addition, improvements to the landscaping, lighting, and paving materials in the main Plaza should be high priority improvements.

The new bus canopies would be the next priority, as they would need to be custom-built, although it is likely that they could be relocated within the Study Area or elsewhere in Downtown when the long-term improvements are implemented. If the bus canopy improvements are not implemented in the short term, more modest improvements, such as seating and lighting, could be implemented in the first phase.

The improvements to the BART rotunda need to be evaluated once the Downtown Area Plan process has identified the preferred long-term vision. The cost of the improvements would be relatively inexpensive and would only be "temporary" if the BART rotunda were removed as part of the preferred long-term vision. Once the timeline for implementing the preferred vision is identified, the cost of the rotunda improvements could be assessed against how long the rotunda structure is going to remain in its current location.

The suggestion to include public toilets as part of the plaza design was proposed by the Transportation Commission and DAPAC. This was evaluated and has been identified as an element to be considered as part of long-term planning efforts.

Presently, there is no space on the plaza to place public toilets without significantly reconfiguring the area. The sidewalks, cafes, open spaces (with clear sight lines), and transit areas are prioritized over public toilets for the overall functioning of the plaza. Additionally, the location of toilets on the plaza could

create security and maintenance issues. For the present needs, the city could negotiate with BART to make the station toilets publicly accessible. The existing station toilets are adequately sized and have their plumbing, lighting and ventilation systems in place. The introduction of security gates and canopies at the secondary entrances will reduce the public urination problems in the stairwells as well.

Public Art Opportunities

There are excellent opportunities to incorporate public art into the BART Plaza. While the canopy structures shown in the illustrations of proposed improvements are fairly simple architecturally, and may not be a potential public art project, there are elements, such as fencing and signage that could be opportunities for public art. In addition, improvements to the exterior materials of the BART vent structure, the BART elevator, and the low walls around stair areas all present additional opportunities for public art or murals. The design of public art should be considered from the earliest possible point of the final design phase of these improvements.

Additional Public Involvement

This study has brought together a wide range of Downtown stakeholders throughout its process and has engaged the broader public in two community workshops. The Downtown Area Plan further expands the community involvement in the design process. As the final design for the short-term improvements proceeds, Downtown stakeholders and the general public will remain engaged in the design process to ensure the improvements support the vision for the Downtown Area.

4.5 Next Steps

There are several important next steps in the process of finalizing the long-term vision for the Study Area and defining future capital improvements. These steps are described below.

Downtown Area Plan (DAP) Process

The Downtown Area Plan process is the proper arena for discussions of larger circulation changes and opportunities for traffic calming or new open spaces on Center Street and the east leg of Shattuck Avenue. The transportation consultant for the DAP process will analyze changes to Downtown circulation, and the changes to the Shattuck Avenue couplet will be one of the issues analyzed. The DAP process is also a proper venue for more in-depth discussion of the transit function of the Downtown and the Study Area than was possible given the relatively narrow scope of this project. The result of the community input from this process clearly supported the two options that include more extensive and dramatic changes (Option 3 and 4) with the

reconfiguration of Shattuck Avenue and the relocation of the primary BART Plaza. The full analysis of relevant considerations, though, may result in an alternative long-term vision in the DAP process.

Ongoing BRT Planning

One of the intentions of this project was to provide guidance for AC Transit as they proceed with planning for bus improvements in Downtown Berkeley. While this project has developed a number of new alternative configurations, there has not been definitive direction given to AC Transit as to the vision for BRT in the Downtown Area (or even if BRT is part of the vision for Downtown). The City, the Berkeley community, and Downtown stakeholders all need to continue to work closely with AC Transit to ensure that improvements to bus access benefit pedestrian circulation, transit connections, and the quality of public spaces and economic vitality in the Downtown. This can be done through both AC Transit's on-going planning and environmental review process and through continued refinement of the Downtown's circulation system as part of the DAP process.

Pursuing Implementation of Short-Term Improvements

The City can begin pursuing funding for the short-term improvements identified in this report immediately. MTC's TLC Capital program provides an excellent potential source of funding. The short-term improvements phase will require cost estimation and detailed design work prior to construction drawings and construction implementation. The Regional Transportation Plan 2030 includes $5 million for BART plaza improvements, which the city can pursue from state and federal sources. The city has already secured $543,700 in Housing Incentive Program funding for the BART plaza improvements.